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approach

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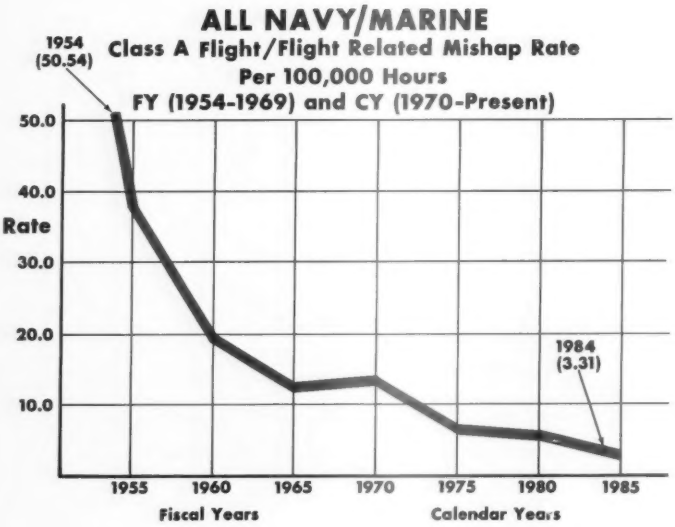
30th Anniversary Issue

TECHNOLOGY & SCIENCE

Approach's 30th Anniversary Issue



Thirty years ago this month, the first issue of "The Approach" was published by the newly formed Naval Aviation Safety Center. The lead article was "Flying the Cutlass," a report by Chance-Vought test pilot Harry Brackett on what it was like to fly the new, state-of-the-art F7U-3. In the foreward, the DCNO (Air), Vadm. Thomas S. Combs, sketched the purpose of the new magazine.

"The Naval Aviation Safety Review will provide a medium through which all of us can benefit from the experience of others. By bringing to light the mistakes as well as the accomplishments of others who fly, we can reduce the number of instances in which pilots must learn the 'hard way'."

We were logging about the same number of hours back then as we are now, but we were losing roughly 10 times as many aircraft in mishaps. A lot has changed since then. Our equipment and training are better. Our safety awareness has increased. As a result, the mishap rate has plummeted, despite the fact that we fly in a faster moving and much more complex environment than we did in 1955.

But some things never change. We still have more mishaps than we can afford and they are still caused by the same old things. We don't know enough. Or we think we know more than we do. We don't pay enough attention to detail. Our situational awareness isn't sufficient. The list goes on. So the purpose of Approach is as valid as it ever was: to pass on lessons learned so that we don't repeat as many mistakes.

In this issue, we review the last 30 years as a reflection of where we have been and an indication of where we are going. Starting it off are interviews, conducted especially for this occasion, with three of the top leaders in naval aviation today. They put the current situation in perspective and provide some direction for the future. Next, we reprint several carefully chosen articles from the past 30 years of Approach, selected for their quality, timelessness and how well they represent the era in which they were originally published.

We may have included an article or two you disagree with and left out one or two of your favorites. But with some 4,000 articles to pick from, the choices were tough. We hope that every Approach reader will gain something of value from this retrospective. It may be an old lesson worth renewing, or a sense that history can repeat itself. Or it may be simply an appreciation of what we owe to our predecessors and, in turn, what we owe to those who will follow.

John Flynn
Editor

inside approach

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Capt. J.P. Smith, Chief of Staff
Capt. E.K. Andrews, Director, Aviation Safety Programs
Cdr. C.E. McCaskill, Head, Safety Publications
Lt. John M. Flynn, Editor

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Commander, Naval Safety Center
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The Principles

s of Professionalism

Approach Interviews the Honorable John F. Lehman, Secretary of the Navy

By Peter Mersky

Approach was able to catch up with the Secretary of the Navy, John F. Lehman, Jr., during his visit to Oceana for the formal acceptance of the Israeli Kfir fighter. The Kfir is to be used by VF-43, the East Coast adversary squadron based at Oceana, and represents an important milestone for naval aviation.

After speaking to the several hundred people assembled in Hangar 200, Mr. Lehman invited them all to take a close look at one of the Kfirs parked immediately outside. As everyone left the hangar to follow his invitation, the Secretary descended the dais. I walked up to him and identified myself as a writer for Approach.

"Ah, Approach, my favorite magazine," he said with a broad smile. Well, with an opening like that, I decided to push my luck. One hour later, I had the heady experience of interviewing the Secretary of the Navy, sequestered on the sun deck of the Oceana Officers Club, temporarily isolated from the many people availing themselves of the buffet and reception inside. I had 10 minutes.

Approach: Mr. Secretary, we at *Approach* are commemorating the magazine's 30th anniversary. Would you care to comment on the significance of those 30 years?

SECNAV: Yes, I certainly would. Three years ago when the big crackdown on publications was initiated, someone had the idea to do away with *Approach.* As soon as I heard about it, I immediately reversed it. My experience has been that *Approach* is probably the most important of the regular defense department publications. It is the most intensively read of any publication of its kind.

I read it every month when it comes out, and virtually every aviator I know reads it. It's made a tremendous contribution to aircraft safety. I think very highly of the magazine.

Approach: When *Approach* was founded 30 years ago, the Navy and Marine Corps aviation mishap rate was roughly 10 times what it is now. Last year we enjoyed our safest year ever. To what do you attribute this success?

SECNAV: I think *Approach* is part of the unique attitude toward safety that we find in the U.S. Navy. It's wrapped up in the word "professionalism." The magazine came out of those years — the 50s and early 60s — when accident rates were a heavy burden, not only to the financial maintenance of an adequate Navy, but on the families. The tragedy, and the loss of life in those years was horrendous!

The whole new approach taken in the late 1960s, with NATOPS, and the professionalism and discipline in safety — out of which *Approach* magazine came —is what *saved* naval aviation as a cornerstone of our defense today. Had we continued the much more disorganized approach to safety which characterized naval aviation *before Approach,* we would have unilaterally disarmed ourselves. Carriers would no longer be affordable.

We owe a debt to *Approach,* in my judgement, and the principle of professionalism which the magazine embodies.

Approach: What is your personal safety philosophy?

SECNAV: I think it's important to remember that our business is to be able to fight. In order to be able to fight, you have to train realistically, and you have to press the edge of tactics. But that is not incompatible with safety because the best tactics require maintaining a level of professionlism and expertise, attentiveness and discipline, that when you achieve that level, it

translates automatically into safety in peacetime training.

It's not either/or — realistic training *or* safe flying. The two go together. But it requires a higher level of discipline and professionalism than routine operations which characterize other parts of our military life. There is a higher standard of discipline and expertise demanded in naval aviation which results in safety, if properly applied.

Approach: You're talking specifically about peacetime?

SECNAV: Yes, our business is to deter war, not to fight it. The only way you deter it is to win it if it breaks out. The only way to win it is to train in a more demanding environment than you will achieve in combat, and that's what is accomplished in the adversary squadrons, at Strike University at Fallon and at the Marine Air Warfare Training School (MAWTS) at Yuma. We are putting our aviators through more demanding training, a tougher environment, against more difficult adversaries than they would face in wartime. That's what's going to save their lives and that's what is going to enable them to win. The perception that they have that capability to win is what will prevent their ever having to fight.

Approach: It sounds like a progression of the philosophy behind the Navy's Fighter Weapons School — Top Gun, and the Air Force's Red Flag at Nellis. You complete 10 missions successfully and you've beaten the percentages, to some extent.

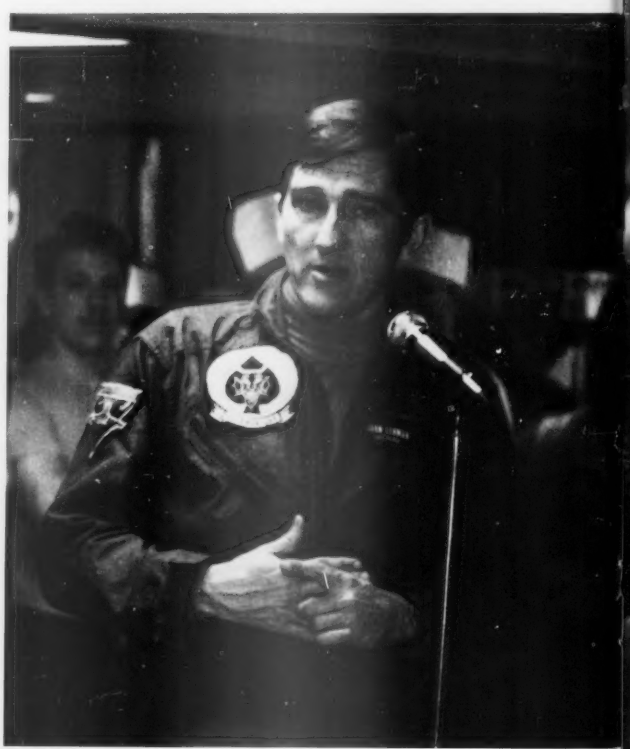
SECNAV: That's very true. We're carrying that to a whole new level, well beyond the pioneering work at Miramar and Nellis. What we're doing at Strike University — and MAWTS is a new generation of integration of demanding tactical training. But safety goes with it.

At MAWTS, we have one of the finest safety records anywhere. Yet it is one of *the* most demanding and realistic — stressful — tactical training evolutions in the Navy today. It's also the *safest*. The two go together, if done properly. It requires real attention and discipline.

I think the Safety Center is a tremendous pioneer in knowing how to instill this throughout the fleet. The people at the Center understand the philosophy although it is relatively new. In the past, some people have erroneously sought to ease up on the training and not make it so realistic, so demanding. They thought that less night low level or less violent maneuvering was a way to improve safety.

That's not the way to improve safety. The way to improve safety is to increase the level of professionalism and discipline in airmanship and tactics. That's what makes the contributions of the Safety Center so important. The Center is *not* preaching "Back off" and "Don't fly so realistically." They *are* preaching that the more capable you are to fight and win, the safer you're

The safety record in our past conflicts has been horrendous. Some studies have shown we have lost more airplanes to accidents than to enemy action.



going to be. That's the right philosophy and the results show it. It goes hand in hand with safety.

Approach: How do you feel this leads into a wartime situation? Can you still maintain that type of safety intergrity in combat?

SECNAV: Well, obviously, there are priorities which have to be shifted in wartime. But the safety record in our past conflicts has been horrendous. Some studies have shown we have lost more airplanes to accidents than to enemy action — by several-fold. That is unacceptable, unnecessary. When you get into a conflict, the discipline and professionalism taught in peacetime will enable you to prevail and stay alive, not run into hills or depart your airplane.

Approach: If you could hammer one point home to the naval aviation fraternity, what would it be?

SECNAV: We're at a unique period of opportunity to make our naval preeminance a permanent state of affairs. The professionalism of naval aviation is a key to making it clear to our adversaries and to critics —domestic critics who don't understand naval aviation — that we provide the nation that inestimable dimenison of superiority that will ensure that we will win if the Soviets choose the path of aggression.

Breaking every record every year and having the safest year is simply a measure of how much better we are getting in being able to prevail in wartime. That's the message. The two are inseparable.

We have the confidence of the American people, the President and the Secretary of Defense because we are projecting that professionalism and self-confidence that we can do the job expected of us. But it's as a result of the level of discipline and professionalism that has been achieved these last four years, and we've got to keep improving it. ◄

Breaking every record every year and having the safest year is simply a measure of now much better we are getting in being able to prevail in wartime.

Approach Interviews Vice Admiral Edward H. Martin, Deputy Chief of Naval Operations (Air Warfare)

Safety and the Value

Approach: Admiral, to what do you attribute the success of the Navy's aviation safety program. In the 30 years in which Approach has been publishing, we've seen a dramatic decline in the mishap rate. Could you comment on this?

VADM Martin: I attribute this success to a realization of the value of assets — human and aircraft — and a greater involvement, a greater degree of professionalism, better training. A better understanding of things related to naval aviation. Approach has contributed significantly to this understanding and, therefore, to this success.

In 1954, we had an accident rate of 50.5. We killed 536 people that year. Last year, we had an accident rate of 3.31. The total involvement of the naval establishment and dedication to making this profession more safe is the main point. This means the involvement of every person in the chain of command.

Approach: Do you see naval aviation getting safer, or is it the best it can get now?

VADM Martin: Naval aviation is never as safe as it can get until we have a zero accident rate. And all of us who are involved in naval aviation should strive for that achievement. Indeed, I do see a continued improvement in aviation safety. There is no limit.

Approach: Is there a relationship between readiness and safety? Is one obtainable without the other?

VADM Martin: I don't think there is a difference between readiness and safety. I think they are one in the same and they are, indeed, complementary. Safety is readiness and the ability to operate aircraft as they were designed to be operated in the environment as part of the overall mission goal. Safety is interrelated with readiness.

Approach: What are the main challenges facing naval aviation today? How can we deal with them?

VADM Martin: I think the main challenges facing us today are the enormous costs that are associated with aviation-related equipment and training with respect to the commitment of naval aviation in our defense establishment. Naval aviation is the centroid of our naval strategy, particularly in the conventional side of the Navy. And our Navy is the centerpiece of our national defense strategy.

The demands upon naval aviation are very, very high in terms of deployments, in terms of being spread out across the globe. One of our greatest challenges today is to ensure that we have the wherewithall to continue naval aviation's capability to support the requirements levied upon us. The cost of aircraft and aircraft-related items is very high. The cost of training people is high. And yet, we still demand results.

Approach: Admiral, what is your personal safety philosophy? What principles have enabled you to fly safely for so many hours in so many different situations?

VADM Martin: First of all, I have always tried to be very safety conscious, with attention to detail, and insisting that safety is everyone's job. Safety involves the total commitment of everyone within the chain of command.

Safety cannot be mandated by a commanding officer, junior officer, or chief petty officer. It must be the commitment and involvement of every single person. Every single person must be dedicated to doing things right, being aware of those things which are unsafe at all times. Alertness, awareness and attention to detail.

Approach: If you could stress one point for the naval avia-

"We should all look on our profession with great pride . . . we must be professional in order to . . . operate in a safe manner."

Vice Admiral Edward H. Martin is the Navy's top aviator. Flying Navy aircraft since 1955, Admiral Martin was the executive officer of VA-34 when his A-4 was hit by a North Vietnamese surface-to-air missile in July 1967, during a mission over Hanoi. Forced to eject from his Skyhawk, he was captured and interned as a prisoner of war for 68 months, until March 1973.

After a brief hospitalization period, he continued with his career, his assignments including staff duty in Washington, D.C., command of the USS Saratoga (CV 60), Chief of Naval Air Training and Commander, Carrier Groups Two and Four. He also served as Commander Sixth Fleet.

In his present position as DCNO (Air Warfare), the Admiral is responsible for establishing policy for the conduct of naval air warfare and determining plans and requirements for all phases of naval aviation. He is the principal advisor to CNO for all matters involving naval aviation.

Approach interviewed Vice Admiral Martin in his office in Washington.

e of Assets

By Capt. R. Rausa
and Peter Mersky

JOCS Kirby Harrison

tion fraternity, what would that be?

VADM Martin: Naval aviators, and those associated with naval aviation, are the finest people in the world. They've also proved to be some of the most capable. We should all look on our profession with great pride and recognize the contributions our profession makes to the national defense, and defense of the free world. We must be professional in order to continue to operate in a safe manner.

Those associated with naval aviation — the aviator, the NFO, the crew member, the maintenance person — are better today, in my opinion, than they have ever been throughout the history of naval aviation. They are better trained, better prepared, smarter and more technologically competent. I think this factor is one of the greatest contributors to the continually improving safety record.

Approach: Admiral, have you always read Approach? Any thoughts as to what you'd like to see in future issues?

VADM Martin: Oh, yes, I have always read the magazine — since the first issue. I think Approach is doing a superb job. Inputs from all quadrants should continue to be solicited, especially from the young people in the fleet. The principle focus of Approach should be toward the young officer and enlisted troop in naval aviation.

In conclusion, as the Deputy Chief of Naval Operations for Air Warfare, I am committed to making naval aviation a highly professional organization; one that is richly rewarding and personally satisfying. One of the key elements in all this is to make naval aviation as safe as humanly possible.

Safety and the Few

Approach interviews Lieutenant General Keith A. Smith, USMC
Deputy Chief of Staff for Aviation

By Peter Mersky

"We are in charge, ourselves, of the tempo of operations . . . individually responsible for the events that occur."

Approach: General, could you give some impression of what you think has contributed to the dynamic decrease in the Navy and Marine Corps aviation mishap rate in the 30 years Approach has been publishing?

General Smith: One of the biggest factors in this success is Approach magazine, itself. I think it does a splendid job of getting the word out on everything that affects the operation of naval aircraft. From the ground handling crews to the people in the cockpits; it covers the whole range. Of course, we've come a long way in things like NATOPS and readiness manuals. The Naval Safety Center has played a tremendous role in flight safety improvement and everybody there can justifiably take credit for it.

However, I will take this opportunity to say that no single person or entity is responsible for aviation safety. It's every man, woman, contractor, supply type and ground crewman. Without every one of them performing to the best of their abilities, with safety awareness foremost is their minds, we're not going to continue making the improvements we've enjoyed in the past.

If we don't get our act together regarding ground safety, we're going to be run out of town. One of the things we're looking at is instituting the mishap reporting procedures for ground mishaps that we require for aviation mishaps.

I would focus the reporting concept on the ground incident labeled "unexplained." A person's driving down the road and for some reason, runs head-on into the oncoming traffic, or loses control. We very glibly write it off as operating a vehicle too fast. But I was amazed, when I had the 2nd

Lt. Gen. Keith A. Smith, USMC, is part of a long, impressive line of Marine aviators who have headed U.S. Marine aviation. An experienced F-4 pilot, he was a member of the first Marine Phantom squadron to deploy to Da Nang, South Vietnam, in April 1965. General Smith has served as Commanding General MCAS Cherry Point, Deputy Chief of Staff for Requirements and Programs, Headquarters, USMC and Commanding General 2d Marine Aircraft Wing.

In his present assignment, General Smith is responsible for the Corps' aviation programs and the personnel who fly and maintain the aircraft. Approach interviewed General Smith in his office at Headquarters, USMC in Washington, D.C.

Good Men

MAW, that we did not extract body fluids in a ground incident. And it didn't make any difference whether it was on the flight line or in an automobile accident. It took awhile to get that mindset turned around. It's simple things like that which can give you insight into the sequence of events that led to an incident to which there is no otherwise perceived cause.

The sophistication which has come with the mishap reporting process has probably played as big a role as any other single action we've taken. It's absolutely amazing what can come out of an examination of a failed component subject to crash treatment. We can reconstruct the sequence by which maintenance was performed, action taken, or not taken, the operator's compliance with the limitations placed on the machinery he's using.

When you can take a turbine blade scraped off the bottom of the ocean, having survived a crash, and tell the sequence of events that occurred with the failure of that blade, I find that remarkable. Years ago we couldn't do that. And I'm sure there is still room for improvement in *predicting* failures as well.

If I were to steer the aviation community in one direction, I think it would be in the area of on-board monitoring systems, especially in the helicopter community. We're doing a lot better in the fixed wing community. But I think there's room for improvement in both.

Approach: Were you thinking of a particular incident, or are you talking in general?

General Smith: I wasn't thinking of a particular incident, but I *was* thinking of communities. The CH-53 community would probably get the first treatment. It's the biggest and most complex helicopter we operate — we're not differentiating between the A, D or E, but the 53 fleet in general. The reason in selecting the 53 over the CH-46 — which we operate more of than the 53 — is that the 46 has undergone recent survivability and maintainability improvements which result in better reliability than experienced in the CH-53.

Approach: You mentioned the 2nd MAW. As Commanding General 2nd MAW, you had great success in turning around the wing's safety record, partially through a rigid standardization program. Why were you so successful?

General Smith: It took us awhile to do it and it was not a Keith Smith original. I drew a chapter from several books before me. Lt. General J.K. Davis, CG FMFPAC at that time, should get credit for most of the things I moved into the 2nd MAW. One was a set of rules. We wrote what we called "guidance messages," the first of which was a currency standard. It developed Marine Corps-wide criteria for flight currency which was the same whether you were operating in the Caribbean, Oman or Korea. These had to be complied with, whether working up the ladder or gaining familiarization training.

Each one of those guidance messages was written after discussion with the group commanders and once one was written, it was given to the MAG COs in draft form so that we had a team effort. When the message was published, there was no discussion about why they couldn't comply; they had already had an input. Now, that's not to say that after the message was on the street for a while, a squadron commander or a lieutenant or a sergeant couldn't provide an input. We were very accommodating. All but one of the 19 guidance messages which eventually came out had some modification after it was published.

We had a bad 36 hours on one occasion, with three Class A mishaps. I stood the wing down from flight operations the next day. Each one of the communities — fighter, attack and helo — had been touched. The stand-down gave me an opportunity to give each community my views on the safety of the wing. I told them we had to have discipline within the individual and accountability within the system. As the Commanding General, I was responsible for *some* things.

The flight line or the sergeant in the maintenance shop was accountable for other things. When we deviated, or failed to measure up to that accountability, there was some corrective measure in order.

I served notice, including on myself, that we were embarked on a very serious adventure and it was time for extraordinary action. There were no business as usual attitudes when they left that first meeting. After discussion with the group commanders, it was felt that these meetings should occur once a quarter, or at least three times a year.

During subsequent meetings, I talked a lot about individual discipline. I said each one of us needs to examine our own individual conduct, capabilities, efficiency and compliance. As we think through the things we're doing — or *not* doing — if we find, for example, we're frequently driving through an intersection when the light is yellow, chances are our personal integrity is beginning to erode and we need to take positive steps to correct it. That raised a lot of eyebrows, but after that conversation settled on the people for about a week, I began to get some feedback — from very interesting sources.

Sergeants would stop me in the PX. A second lieutenant sought me out at a social. A lieutenant colonel came up to my office to talk to me. And . . . there were some people financially encumbered for their lack of interest in the program. I fined some of them. I think everyone who works in the aviation safety business says we have to wear white gloves and a white hat. But sometimes you have to put on a black hat to make a point or two. And generally speaking, it's the wing or group commander who has to do that. The squadron commander doesn't have the opportunity that we at a higher level do.

Approach: Is naval aviation as safe as it can get, or do you foresee a 3.0 or 2.0 mishap rate down the road?

General Smith: Well, that's sort of philosophical on the face of it. Zero defects is where we ought to be headed. Our objectives ought to be zero mishaps and zero failures. As long as we have material and humans in the loop, we're going to have failures. The challenge to us is to reduce those failures to the absolute minimum possible. For example, a mechanic inspects a rotor head and finds corrosion. He makes the determination, based on his limited experience, that he won't do anything about it at that time. The aircraft goes off and has an in-flight failure, in that same area. The guy made a decision, and that's what we pay people to do. What we failed to do there was to impress upon that individual that when there is a deviation from the norm, it should be talked about with others, and not determined unilaterally. Two brain cells are better than one every time.

Now, that was an example of a material failure. The corrosion was not designed to be there for another 400 or 500 hours. The Marine maintenance man involved was acting in terms of reference he understood at the time. So in this part of the discussion, the demand on the leader —whether he is the sergeant in charge of the shop or the wing commander — is to get across the point that if something is different, you should react to it by getting another opinion.

"Discipline, personal discipline and absolute integrity . . . if you've got those two building blocks . . . the rest will follow."

In that regard, I'd like to talk about one other area which is a real challenge to the leaders, no matter at what level of leadership: *signals.*

An individual who is normally cheerful and responds brightly to interaction opportunities in the office, walks in one day and says "hang it in your ear!" You're probably getting a signal and you need to do something about it. You might want to poke around a bit to find out what is going on in that individual's life and why he or she has changed.

We also get signals from equipment. You're starting up ground support equipment, and it rolls a little bit farther than you thought it ought to after you've applied the brakes. Don't park the vehicle and walk away. Do something about it. Write up a maintenance action form. Get something done. Most times, the reason we don't follow up on a signal is "tempo of operations." We're too busy to do anything different. I'll stamp on everybody's foot I can reach who gives me that answer because there is no reason for that reaction. We are in charge, ourselves, of the tempo of operations. We are individually responsible for events that occur. When we're willing to accept press of business as a shortcut, we probably risk somebody's life or the future of a machine.

Approach: Are you talking about peacetime?

General Smith: No. I think I would say something very similar regarding combat. When I had VMFA-542 in the fall of 1969 at Da Nang, we had three losses in four days. We lost six people. I walked into the group commander and told him we needed 48 hours to work on our problems. He said, "You've got it." We didn't fly a mission for two days. The first two missions after that period were test hops. For almost 50 hours, we didn't turn a wheel in combat. And we didn't lose another aircrew or aircraft in the next seven months. We redeployed back to the U.S. at the end of those seven months.

Now, what did we do when we didn't fly? We talked about the basic aerodynamics of the airplanes. What the F-4 could or could not do. Absolutely basic discussions, V/N diagrams, NATOPS manuals, charts and graphs in the back of the book. We worked 16 hours and slept eight. And I mean eight. I bed-checked everyone in the squadron, from the lance corporal on the flight line to the XO.

So, we can reduce it. We did pretty well last year, but we have some challenges in front of us this year already. But I think we can continue the progress we made last year.

Approach: What would be the one point you would really like to bring home to the folks in Marine aviation?

General Smith: Discipline, personal discipline and absolute integrity of the individual. If you've got those two building blocks in place, the rest will follow. The example of the Marine inspecting the helicopter rotor shows he thought he did right, but he failed the discipline test of seeking another opinion. Don't act on your own unless it's a life or death situation.

Recognizing a signal, what a signal represents and what to do about it is extremely important in the safety equation.

Approach: What is the relationship between readiness and safety? Do you have to sacrifice one to get the other, or are they complimentary?

General Smith: I think readiness and safety are totally interrelated and interdependent. You can't have safety without readiness, or vice versa. There was a time when it seemed like we were crashing more airplanes than we were bringing back. There's a saying which ought to appear on every ready room bulletin board: COMBAT READINESS THROUGH SAFETY AWARENESS AND TACTICAL PROFICIENCY. That's the point that should be made to everybody.

Approach: What are the main challenges facing naval aviation today? How can we deal with them?

General Smith: Stability in the work force. Train and lead them; that's paramount. As we introduce new weapons systems, we must learn and understand their potential and how we can best capitalize on it safely.

In 1980, we were about 50 percent full mission capable, and 60 percent mission capable. Today we don't have a weapons system that is less than 65 percent FMC (full mission capable), and the norm is closer to 70 percent. That reflects the recognition on the part of the Department of the Navy of the value of ready airplanes and sound equipment. We are also realizing the benefit of engineered reliability, a big, big factor. If we can keep ourselves focused on these types of improvements — engineered reliability and proper balance of spares — we'll go further in our safety record.

If I can revisit the people side of the question, what I meant by stability is retention and stability in leadership. The Commandant, General Kelley, has very rightly directed that we will have two-year tours as commanding officers; 18 months may be discussed. A commanding officer can thus, not only see the fruits of his labors, but be accountable for them. It is absolutely *irresponsible* to accept a year's tour of duty as CO. That type of turbulence drove more turbulence, and we were seeing the work force — corporals and sergeants — serving only nine months in a squadron. The CO serving a two-year tour is inherently going to pay attention to the stability of his work force. We will see sergeants and master sergeants with six, seven, maybe eight years in the squadron.

Approach: What about retention, general?

General Smith: Retention has a lot of faces to it, but we have better retention now than we have ever enjoyed. One of the factors is stability of assignment. As a result, we are currently at 103 percent of our requirements for Marine pilots and NFOs.

The number of people we have to train has been reduced. Retention statistics improved after we had signed a number of pilot and NFO candidates. The bubble occurred in the training pipeline after graduation from basic school and in the fleet replacement squadrons (FRSs). We offered the Navy the opportunity to assess those two groups. The Navy talked to them and convinced a number of basic school graduates to request an interservice transfer. The FRS graduates, if they are reservists, were offered the opportunity to transfer, if their year groups were closed, with no opportunity for augmentation. These reservists had completed flight school but had not yet started flying in the FRSs. That helped both the Navy and the Marines; we had a deficiency in available seats; the Navy had too many seats.

Approach: General, what would you like to say to conclude?

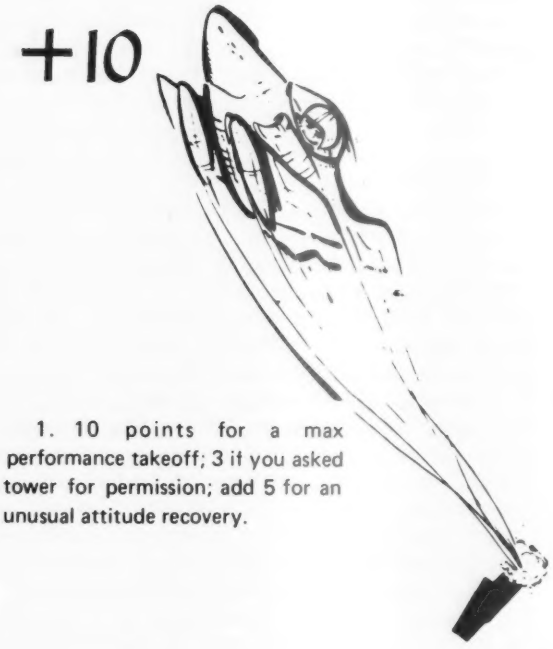
General Smith: Simply said from the heart, if a guy responds to the question: What did you do for the nation today, and his answer is: "I did everything in my power that I could to do it right," we've got the right mindset. That's a big challenge. ◄

How SIERRA HOTEL* are you?

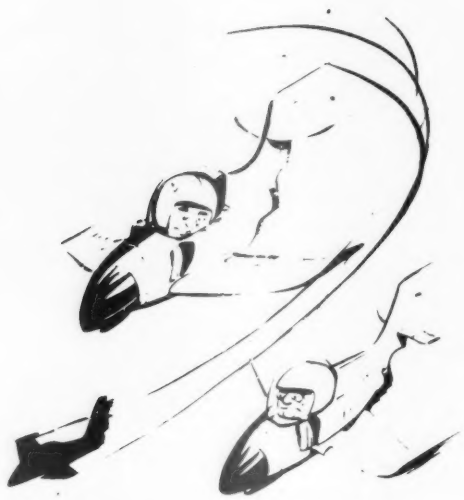
By LT R. Wilkes,
Reprinted From January 1975 Approach

WE all know it takes a special type of person to walk in the door of Indoctrination Battalion at Pensacola and stick with it until he finds himself fighting to stay on the glide slope during a night CCA. This special quality comes under many names within the trade, but can be described as dash, daring, a desire to it skills against greater challenges and be among the best.

Then we come to a select group within this proud brotherhood who would be described as SIERRA HOTEL. In a community of tigers, the normal competitive urges are magnified, and there are those who wish to rise above the masses. So how SIERRA HOTEL are you? Take the following test and find out. Although it is slanted toward jets and carriers, with a little imagination members of other aviation communities can make the correlation.



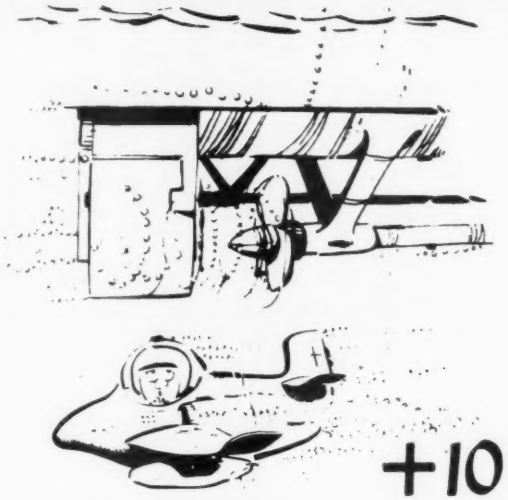
1. 10 points for a max performance takeoff; 3 if you asked tower for permission; add 5 for an unusual attitude recovery.



2. 15 points if you jumped a section of *Phantoms* or *Crusaders;* add 10 points if you won the fight (unless you were in an A-4 or A-6, then you get 2 points); add 10 more if you made a big thing about it.

3. 10 points for a rendezvous with 300 knots of closure speed; add 15 if you got both engines relit just as you slid into parade position; add 10 if you were rendezvousing on the skipper.

* *SUPER* HOT



4. 5 points for a low pass abeam the ship; add 5 if you were lower than the flight deck; 10 points if you were so low nobody knew you did it.

5. 10 points for a 500-knot break; plus 5 if you had an accelerated stall; add 15 if you recovered and called it a tuck-under break; 5 more if anybody believed you.

6. 5 points if you were up late booming and still made your zero-dark-thirty brief; 5 more if you had a barf and a cigarette for breakfast; minus 15 if you had to catch it in your glove.

7. 10 points if you wear a moustache; add 7 if your XO hates it; add 15 if the XO then decides to grow one of his own and you shave yours off.

Rate Yourself. If you scored more than 100, you are really SIERRA HOTEL. You have people asking you to leave them your stereo and leather jacket when you smoke in. A flight violation beats no mail at all. If you scored between 75 and 100, you, too, are SIERRA HOTEL, but you manage to stay awake when the safety officer talks at AOMs. Between 50 and 75, you are probably a normal red-blooded JO who shows some *pizzazz*, but stays within the boundaries of good sense and professionalism. If you were between 25 and 50, you are probably a LCDR or above with a leak in your G-suit.

Watch it, though. Because if your score is too low, you just may be saddled with a squadron command.

You're probably wondering what all this means. Well, aside from the attempt at a little humor, there really is a valid test of how SIERRA HOTEL you are. How well do you perform the primary mission of your aircraft? For example, are you near the top of your squadron in CEP when you go to Falon or Yuma? Are your carrier landings consistently outstanding? If you are an NFO, how well do you know your bombing/air intercept system? Do you score high on your NATOPS exams?

It is still important to fly with spirit and elan, and sharp breaks and flybys done in an authorized manner improve the morale of crewmembers and ground troops alike. But let's not blow it out of proportion. If you can bomb better than your Skipper, get OK-three wires all the time, and know your aircraft better than any other dude in the squadron, your reputation as a SIERRA HOTEL pilot or NFO has already been made. ◄

"He's going to

hit us!"

By R.A. Eldridge
Reprinted from November 1982 Approach

The setting: Night operations aboard a carrier. A downed F-14 was taxiing forward from the rear of the landing area.

As the pilot saw it:

"As we taxied forward past the No. 1 wire, I noted that the landing area lights and the Fresnel lens had come on. Moving forward past the No. 3 wire, my RIO stated that he felt uncomfortable taxiing down an active runway. I concurred. Passing the No. 4 wire, we were given a left turn signal, turned approximately 45 degrees, and stopped. At this time I heard the air boss scream 'Wave off! Wave off!' on the radio. I looked over my left shoulder and saw an A-7

on short final coming toward my aircraft. I transmitted to my RIO, 'He's going to hit us!' Hoping the A-7 might see me, I turned on my aircraft exterior lights and advanced power to MILITARY to move our aircraft out of the A-7's way. Ten to 15 feet later, I felt that the A-7 would impact the top of our aircraft. Yelling 'We're getting out of here!' to my RIO, I turned forward, reached down, and pulled the lower ejection handle. I estimate the position of the A-7 at the time I initiated the ejection sequence to be approximately halfway between the ramp and my aircraft, still descending.

"I was aware of forward movement of my aircraft toward the port side of the ship but not the speed. I would estimate ejection initiation occurred when the aircraft was 50 feet from the port side of the ship. I was looking forward at the ACM panel, saw a brilliant orange flash around the canopy, which I assumed to be the canopy leaving or the rear cockpit seat firing, and then heard a concussive bang. My next recollection is of tumbling end over end." (We'll leave the pilot in the air following his ejection and return to him later.)

As the RIO saw it:

"Once aft of the No. 1 wire, we were again turned around starboard 180 degrees and directed to taxi forward. About this time I noticed the lights of an aircraft a couple of miles aft. I then assumed this to be the lights of the plane guard or an ASW helo. As we continued forward, we both noticed the landing area lights and centerline strobe come on along with the lens mirror system. We continued slowly forward as I remarked that I felt rather uncomfortable taxiing across an active runway. My pilot joked as we saw a centered ball while taxiing over the No. 3 wire and said it might be the only centered ball I'd see today. *(How right he was!)* Continuing forward, we were turned approximately 45 degrees to port, still in or just forward of the wires. I turned around to the left in my seat to see what were obviously the lights of an aircraft on short final, almost over the ramp. I yelled 'Unprintable!', heard a loud explosion, and felt a combined sensation of tumbling and losing consciousness. My next awareness was of twisting around in midair, suddenly realizing that the ejection sequence had been initiated, and watching the ship slide by in front of me." (We'll also return to the RIO later.)

An A-7E that had completed a night bombing/SSC mission was holding in the stack at Marshal with an approach time of 0440. At 0433, the air wing LSO and two squadron LSOs were waiting in a compartment on the 03 level, adjacent to the flight deck, aft of the LSO platform. They were unable to proceed to the flight deck because of aircraft turning just above their exit to the flight deck.

The pilot of the A-7E (Joyride 306) had the ILS display selected on the HUD (heads-up display) and the ACLS (automatic carrier landing system) display on the ADI (attitude direction indicator). He reported a good ILS.

CCA: *Joyride 306, lock on, say needles.*
306: *Three zero six, centered and up.* (The pilot had previously observed a landing check light. At this time he observed the ACLS needles locked in the center and reported the ILS needles he intended to fly.)
CCA: *Three zero six, concur, continue Mode 2, centerline is slightly left.*
CCA: *Three zero six, centerline is slightly left at 4 miles.* (The plane ahead of 306 had been told the deck would not be ready. He was waved off and told to remain dirty while turning downwind.)
306: *Zero six.*
CCA: *Three zero six slightly below glidepath, centerline is slightly left, two and three-quarters miles.*
306: *Zero six.*

Following this transmission, the air officer announced over the 5MC: "Launch complete on the waist, make a ready deck. First aircraft at 2 miles." He was aware that he had an F-14 in the aft landing area taxiing forward. There was also an A-6 turning up aft of the LSO platform. The LSO V-2 phone talker reported, "LSO on." This communication check was acknowledged by the Pri-Fly V-2 phone talker. When the LSOs heard the "launch complete" call by the air officer, they proceeded to the flight deck.

The air officer directed Primary personnel to turn on the landing area lights (centerline, box, drops, strobe, and athwarts) and the Fresnel lens. In Primary, the FLOLS (Fresnel Lens Optical Landing System) operator noted that the LSO platform console lights were not visible and the LSO V-5 phone talker had not checked in on the 11JG circuit. He advised the PLAT lens room to turn on the lens lights. When they were turned on, he reported it to the air officer, who acknowledged that the lens was on.

306: *No drop lights.*
306: (2 seconds later) *There they are.*
CCA: *Three zero six, slightly above glidepath, centerline is left, a mile and a quarter.*

At this point, the air wing LSO in the port aft catwalk observed the A-7 in landing configuration at about 1 mile. He noted the FLOLS was on in the night intensity setting as he was running to get to the platform. His progress was impeded by the A-6 with a towbar and tractor and the jet blast from the F-14 forward in the landing area. When the LSO arrived at the platform, the phone talker was frantically attempting to raise the metal cover on the LSO console to get to the waveoff pickles. The V-5 phone talker was wearing an *unloaded* very pistol in a holster with a full cartridge pouch.

CCA: *Three zero six, above glidepath, centerline is left, three-quarters of a mile, call the ball.*

The pilot reached down to check

The swimmer hit the water about 300 feet away, swam over, attached the horse collar hookup to my D-ring, and we were pulled into the helo without incident.

his headset connection because he did not hear his ball call acknowledged by the LSO *(no acknowledgement on a ball call is a mandatory waveoff).*

Air Officer: *"No chance, Paddles"* on the 5MC.

In CCA, the ACLS console operator selected the ACLS waveoff command button, having observed a foul deck indication on the PLAT and not having heard an LSO acknowledge the ball call. His range estimate was one-fourth to one-eighth of a mile.

The *Corsair* pilot did not see the waveoff display in the cockpit.

Air Officer: *I said no chance, Paddles, no chance! Wave off! Wave off!*

Unfortunately, the air officer's urgent transmission to wave off went out on the departure frequency to which his radio was set, vice the A-7's landing approach frequency. This was the frantic transmission that the F-14 crew heard, since they were still tuned to departure frequency after having gone down on the catapult.

At 04:42:49, an LSO-initiated waveoff was recorded for posterity on the PLAT. One second later, the nose of the A-7 was over the rounddown. The Primary FLOLS operator actuated his console waveoff button at the same instant. The PLAT switched to the centerline camera, and the A-7 was clearly distinguished, lined up slightly right of centerline, with mainmounts straddling the F-14's starboard vertical stabilizer. At the instant of collision, the PLAT island camera depicted the dual ejection of the F-14 crew. At MILITARY power, the now-crewless F-14 disappeared over the port side of the carrier, into the water.

CCA: *Three zero six, level angels two, turn left heading zero six five.*
306: *Yeah, we just clipped a plane on deck.*
CCA: *Three zero six, roger, take angels five overhead. We'll join somebody on you, sir.*
306: *Roger.*

Subsequently, another A-7 joined on the mishap A-7 to ascertain the damage. Although the damage to the A-7 was minor, a decision was made to barricade the *Corsair* because the tailhook was damaged. Approximately 2 hours later, at daylight, the pilot made a successful barricade engagement.

The pilot's ejection and rescue. "I felt great relief at seeing my RIO's parachute canopy fully deployed approximately 150 feet beneath me. I had been concerned that he might hit the wing of the A-7 as it flew toward my aircraft. I then hoped my parachute would deploy properly. I wondered if I could survive a 250-foot fall into the water if it didn't deploy. I then felt a mild, comfortable opening shock and noted that I wasn't falling fast, so I knew I had a good chute. I noted that both of us were going to clear the ship to port, my RIO by approximately 50 yards, myself by about 100 yards. I estimated my time in the chute to be about 10 to 12 seconds.

"As I approached flight deck level, I inflated my LPA and it worked perfectly. I elected not to release my upper Koch fittings until water entry because there was a lot of wind, I would not land near the ship's wake, and I was swinging significantly in my chute. I had no difficulty seeing the water approach me and released both fittings properly. I went underwater approximately 5 feet and came to the surface immediately.

"My first concern was to get clear of the canopy, which was close to me. Some shroudlines were on me. I pulled away from the canopy and looked around. I saw a strobe light 50 yards away and felt my RIO was safe. I then began to open my survival vest to extract my strobe light. At that time a wave hit me and washed the canopy on me again. I felt a shroudline pull on my right leg, at which time I reached down and freed it from my leg restraint fitting. I paddled for about 30 feet before attempting to locate my strobe light. I had difficulty locating the strobe, so I took out my flashlight and attempted to look for it. I removed the red lens and discarded it. At that time I heard the sound of an approaching SAR helicopter. I abandoned my search for the strobe and pointed the flashlight at the helicopter. He saw it immediately and headed for me."

After a swimmer was dropped in the water, the pilot was successfully attached to the rescue harness and hoisted into the helo. He sustained no injury whatsoever during the entire evolution.

The RIO's ejection and rescue. "I pulled both LPA toggles at or slightly below flight deck level, felt for and found my upper Koch fittings, and looked down to judge height over the water. At 5 to 10 feet, I popped both upper Koch fittings, dropped into the water, and bobbed up to see my chute collapsing at least 30 to 40 feet away.

"My next action was to attach my strobe onto my helmet (via *Velcro*). My right waist lobe of the LPA had inflated but had not popped out of its cover. I fumbled with this for a couple of minutes, then suddenly realized my seatpan was still attached. Both lower Koch fittings were released easily, but I experienced some difficulty in disconnecting the oxygen quick-disconnect. Once I freed the oxygen hose, I pushed the pan out in front and attempted to deploy the raft. I was unable to open the pan and, realizing that the helo was nearby, shoved it away and swam to be clear of it.

"After a few minutes, I attempted to use my PRC-90 but was unable to free the helmet plug-in (even in the

light of my flashlight). I did not want to remove my helmet to hear the radio, so I simply selected the beacon position for a while until the SAR helo was close by. I lowered my clear visor to protect against spray from the helo and awaited pickup. The swimmer hit the water about 30 feet away, swam over, attached the horse collar hookup to my D-ring, and we were pulled into the helo without incident."

Debris from the collision was propelled by the jet exhaust of the mishap F-14 across the flight deck toward the area aft of the island. It caused minor injuries to five flight deck personnel and killed one technician. When the F-14 canopy departed at the time of ejection, it struck the technician, who was located forward of the starboard intake of a parked F-14. The canopy first impacted the flight deck and was blown toward the parked F-14 by jetwash from the mishap F-14.

Air Officer's Waveoff Button. The FLOLS source light intensity adjustment synchros had been inoperative in Pri-Fly and at the LSO platform for 4 to 5 weeks. The master console in the PLAT/lens room was being used to activate and control the lens light intensity. With lens control authority in the PLAT/lens room, neither the Pri-Fly console nor the air officer's waveoff button activated the waveoff lights. *The air officer was aware that his waveoff button would not activate the waveoff lights.* Therefore, when the Primary FLOLS operator activated his console waveoff button, the waveoff lights failed to flash. Later, when the schematics were reviewed, it was found that the air officer's waveoff button should work, regardless of which FLOLS console had control. During an in-depth wiring inspection, the air officer's button was discovered to be misrigged.

During the approach, the air officer advised flight deck control that the A-7 (306) wouldn't make it and that they would trap the next aircraft. He further advised the CATCC watch officer to "take 306 around" when the A-7 was about a mile and a half from the ramp.

The watch officer started to relay this information to CCA but heard CCA transmit to 306, "Three-quarters of a mile, call the ball." Therefore, he chose not to pass the word to CCA at that time, since the A-7 was under LSO control *(he assumed).* Nor did he report this decision to the air officer.

At the time of the mishap, the rotating beacon, located aft of the island and controlled by the air officer, was red. This indicated there was no clearance to land aircraft.

- **Analysis of the mishap.** There are multiple safeguards designed into carrier operations, particularly at night, to prevent a mishap such as this one from happening. Yet each safeguard failed and the mishap occurred. Why? More than likely, the simple answer is that human beings are involved and human beings make mistakes. This was not the first time a mishap such as this has occurred, and it probably won't be the last. Let's look at some of the safeguards.

- **Activation of FLOLS and landing area lighting.** Paragraph 536 of the CV NATOPS states: "Except for the purpose of conducting tests, neither the lens nor the landing area lights shall be turned on until the controlling LSO establishes positive communications with the air officer." Since the lens and landing area lights were turned on before communications were established with the controlling LSO, that safeguard was nullified. Without lights, the pilot would not have attempted to land and would not have made a ball call when told to do so by CCA.

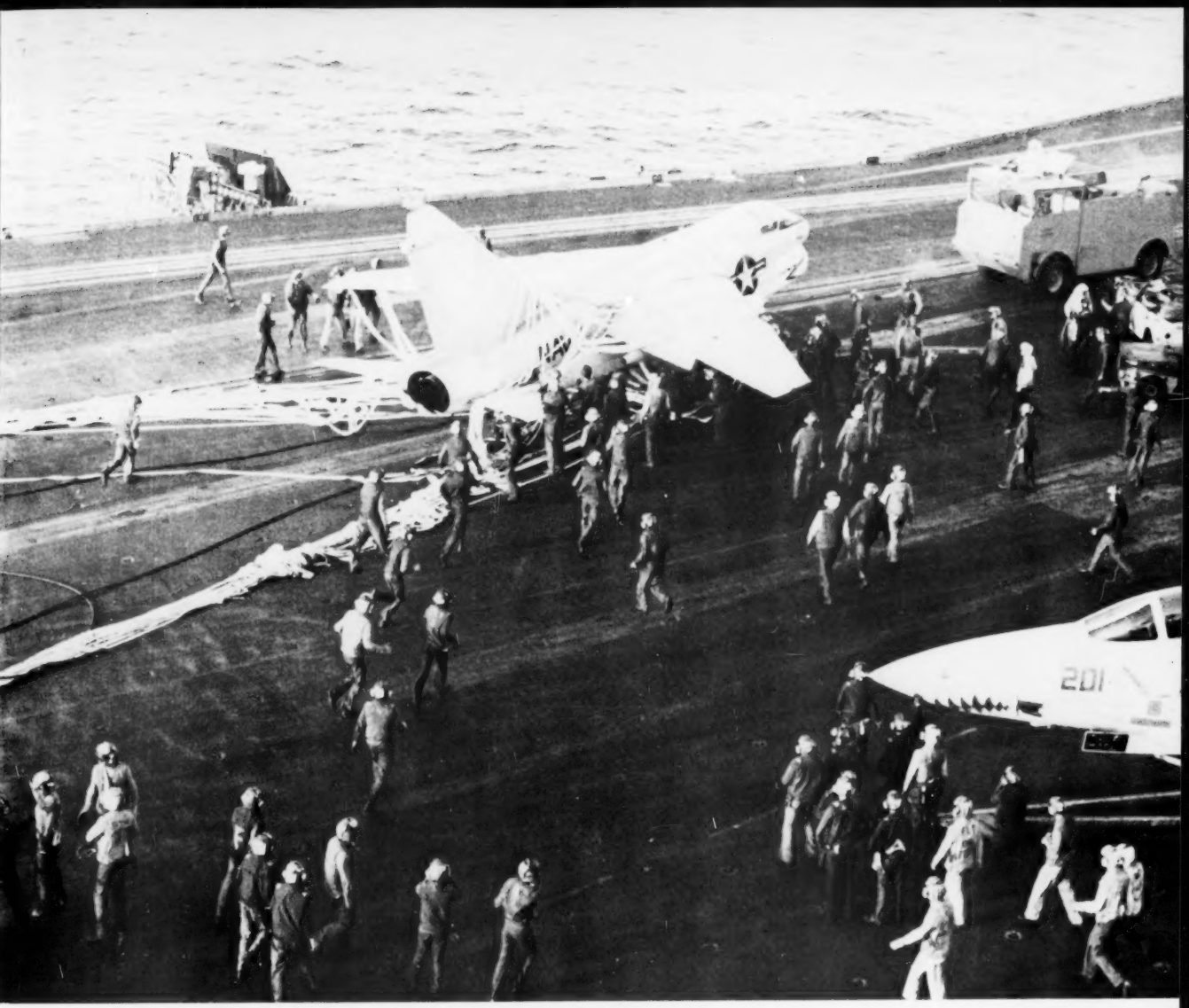
- **No acknowledgement of ball call.** The built-in safeguard of not receiving an LSO acknowledgement of a ball call mandates waveoff by the pilot. This did not occur. Even though the pilot was required to take a waveoff, a series of circumstances occurred to lead him down the primrose path. The fact that he recognized the centerline droplights were not illuminated initially, reported same, and then, 2 seconds later, noted that they were turned on, created the impression that the LSO had responded to his call of no droplights and had turned them on.

- **Very pistol at LSO platform.** The LSO phone talker is equipped with a very pistol as an emergency signaling device. Unless conditions exist which might require its use, the very pistol is not loaded *(it is doubtful if there would ever be a more opportune time to use it than in this instance, yet it was impossible to do so).* This was an emergency safeguard that was not set to produce a short-notice effect.

- **Air officer's waveoff button.** The schematics showed that the air officer can initiate a waveoff at any time, regardless of which FLOLS console has command. But because it was misrigged, this safeguard fell by the board.

- **Pri-Fly manning.** On the night of the mishap, the air officer was the only qualified officer in Pri-Fly. The assistant air officer's position was vacant. During a typical launch/recovery evolution, the air officer maintains an almost continuous dialogue with a large number of personnel. He commands and is the hub of a complex communication network consisting of at least 15 separate intercom, radio, announcing, and telephone circuits. At the same time, he is receiving and returning reports of the Pri-Fly crew and coordinating the entire flight deck and terminal area operations. Even with the assistant air officer present, the simultaneous launch/recovery evolution presents a tremendous workload. Without such assistance, Pri-Fly duties can reach excessive proportions. Having the assistant air officer in Pri-Fly is another safeguard. It is pure conjecture, of course, but the mishap might have been prevented if there had been two officers in Pri-Fly to divide the workload.

- **Pri-Fly FLOLS operator.** Among



his responsibilities is to establish two-way communication with the LSO V-5 phone talker and to ensure that the lens is activated only when directed by the air officer. Prior to being directed by the air officer to turn on the lens, he'd been unable to establish contact with the LSO V-5 phone talker. Had he reported this to the air officer, upon receipt of the lens command, the air officer would probably have noted his error and retracted his order. This safeguard could have prevented the mishap.

• **FLOLS source light intensity adjustment mechanism.** This adjustment was faulty on the Pri-Fly console. Because of this, the FLOLS light sources had to be activated and adjusted from the PLAT/lens room. This also resulted in denying the air officer the use of his waveoff button. Had the malfunction not been present, the Pri-Fly console would have been in command, thereby allowing the Pri-Fly FLOLS operator to issue an effective waveoff.

This mishap illustrates the need to adhere to proven operating procedures and to emphasize the premium of the concomitant safeguards those procedures provide. In this case, the multitude of redundant safeguards (instituted as a result of lessons learned from past mishaps) failed. Had just one of these preventive measures been correctly exercised, this tragic loss of life and assets would not have occurred.

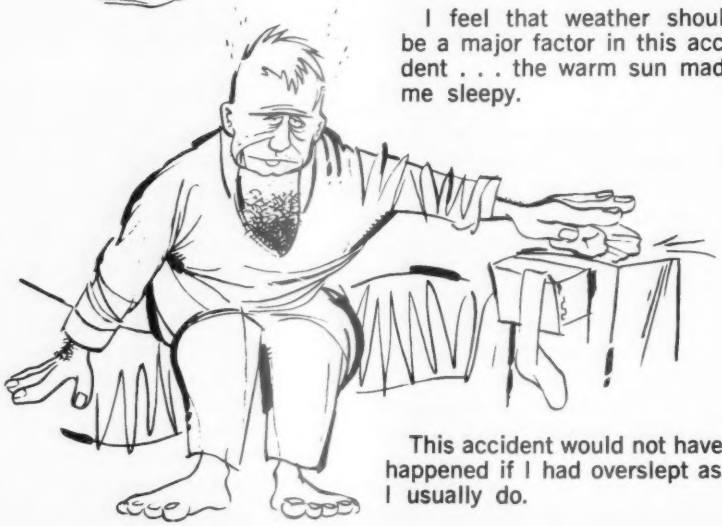
Constant reemphasis on the need to comply with existing procedures is of more importance than recommending additional ones. The procedures to prevent this type of mishap are in existence and have been evolved over a long period of time. There's no magic involved. All we have to do is abide by our own set of rules. ◄

PILOT '?' STATEMENT QUOTES

I admit that this accident was due to pilot error . . . but there was nothing wrong with my judgment or technique.

The only material failure which occurred was me.

I feel that weather should be a major factor in this accident . . . the warm sun made me sleepy.



This accident would not have happened if I had overslept as I usually do.

This accident could have been avoided if someone had reminded me to put the wheels down.

An essential part of each AAR is the pilot's statement, if available. He must make a statement concerning the cause of the accident and how it might have been avoided. Whenever Safety Officers gather around the milk bar some of these gems always find their way into the conversation. Here are some of the best we have ever heard and a few go back many years. While we cannot vouch for the veracity of them all, some at least we know are true.

I consider the primary cause of my accident to be supervisory error . . . my wife kept me up nearly all night.

This accident could have been avoided if my date last night had not been so obstreperous.

The primary cause of this accident is Administrative. I should have never been graduated from flight school.

I would not have had this accident if I had not been led into making a short tight pattern by Waves sunbathing on the barracks roof.

Let's do away with aviat

By Lcdr James E. Novitzki
Reprinted from November 1980 Approach

HERESY, you say? How can you say that in a safety magazine? I say it precisely because this is a safety magazine. Although no one likes to think about it, the title expresses the feelings of many commanding officers, department heads, chief petty officers, and other personnel in the Navy. First of all, almost none of them object to safety as an idea; it is like apple pie and motherhood. What they do object to are safety officers and at least part of many aviation safety programs. What are some of their objections, then? Let's list a few: the programs do no good; they make extra work; they keep people from getting the job done; they take too much time; they have become ends in themselves; they're not needed. Take a couple of minutes and look at each of these objections and see if any apply to you and your squadron.

Objection 1: "Safety officers and safety programs do no good." If one only looks at accident statistics for the last 3-4 years, one could get that idea. The accident rate has not decreased significantly in the last few years, but before we write off the safety effort as useless, consider first what we have achieved. Since the implementation of safety programs as such, the Navy accident rate has been reduced by more than a factor of 10. In 1952, the Navy accident rate was almost 6.0 per 10,000 flight-hours, with a total of 2215 major accidents for the year. The Weekly Summary contained an average of 30 accident briefs per week. If we had that rate today, we could eliminate the entire Navy and Marine Air Forces in a little more than a year. Today the accident rate is about .65 per 10,000 hours, largely due to the efforts of dedicated safety officers and safety programs that produced NATOPS, OPNAVINST 4790, fleet replacement squadrons, and the Naval Safety Center.

The standard rebuttal to this is: the airplanes have gotten better, there are more safety devices and backup systems, and with or without a safety program, the accident rate would have dropped. It is true there have been improvements, but aircraft are still not failsafe. Eighty percent of aircraft accidents can be traced to human error. Consider this fact: light aircraft have been refined to the point that they are little more difficult to fly than the family car is to drive. There is no mandatory safety effort; most safety concerns and responsibilities which are controlled or monitored in the Navy are left up to the individual in civil aviation. Yet, in 1979 the civil accident rate converted to 10,000 hours was approximately 20. The procedures and checks in safety programs do make a difference, and consistent effort can reduce the accident rate.

Objection 2: "The safety program is extra work." In some squadrons this may be a valid complaint, but things do not necessarily have to be this way. Safety does not have to be, and in fact shouldn't be, an add-on program. Every job we do in the Navy has a right way and a wrong way to be performed. Sometimes there is also an expedient, Navy way, but even in that case, it is still a method or procedure that performs what is desired correctly and efficiently without injury to the person performing the job and without producing shoddy or incomplete work that could kill or injure those who must subsequently use the equipment. In fact, the safe way is always the right way to perform a job. Every training session, as it mentions the proper way to perform a job, the dangers associated with the gear, etc. is, in reality, a safety lecture. There is no need to add additional lectures or training; merely emphasize the inherent characteristics of the jobs. This includes flight safety as well.

NATOPS restrictions are there to ensure that the mission is accomplished and that there will be no injury or damage to the aircraft or crew. There is no need for a separate safety lecture on bombs, etc. The lectures describing delivery techniques, loading, etc. should cover the various safety aspects of each operation. It's the professional and the right way to do it. If the inherent quality of safety in doing things right is emphasized constantly in the squadron, then the feeling that safety is an add-on will disappear. The command that always looks for shortcuts and faster ways to do things, without considering all of the consequences, will still feel that the safety program is a problem, but in these cases, it is their approach to safety and not safety that is the problem.

Objection 3: "Safety keeps people from doing their job." This is closely tied to the previous objection. The first question that needs a resolution is "which job?" Are the people qualified and trained for the particular job? Why not? Is the command manned to perform the job? Is the job really worth the risk of injury? Safety is primarily concerned with

ation safety programs!

preserving personnel and material assets, but the realization of the requirements to perform the mission has not been forgotten. In almost all cases, accidents occur when there are corners cut that unnecessarily increase risks. All too often we hear: "We didn't have enough time or men to do it right." These same commands often are forced to take time and personnel to conduct accident investigations, write CACO letters, etc. Leadership and direction before the fact could accomplish more with the time spent and yield additional positive results.

In peacetime, the Navy does not need gamblers. Men and planes are too valuable to be risked because it "probably will be OK." Consider the VP squadron that shortcuts maintenance to get an extra sortie out one day and then loses the aircraft. The result is that during the remainder of the deployment they have one less crew and plane with which to meet the schedule. The CO must provide guidance. Is this mission really worth it? Sometimes the decision *"not now"* must be made. The Ops officer and, ultimately, the CO must make the decision. If the safety officer has to push to have an unsafe evolution stopped, that's not his fault.

Objection 4: "Safety takes too much time. There is so much paperwork and so many procedures involved in the many programs that they are not efficient and force people to cut corners elsewhere to make deadlines." A typical example used is tool control. "My men spend more time filling out forms, running for tools, and inventorying them before and after use than they spend actually performing maintenance, in many cases." In some commands, that is almost true, but is it the program's fault? The purpose of tool control primarily is to prevent an airplane from flying with a tool in it. We have been very successful in achieving this goal in some commands, while others never seem to get a viable program operating. Too often this is because the maintenance department has been presented with a completed, rigid tool control program. Many personnel are unaware of why the program even exists. If this is the case, present the problem to the maintenance department and let the experts design a program that will work. If you don't, and they can't, people will find ways to short circuit or work around your program.

Objection 5: "The safety program is an end in itself. It forgets that our purpose is to accomplish a mission." The CO has the ultimate authority and responsibility for everything in a squadron, including safety. He must set the tone and direction of the program. If he sits back and abdicates this responsibility, then the safety officer will step in with his priorities, which are often different than the CO's, and build a program that he perceives will do the job. Safety officers have a right to this "tunnel vision," for they are trained to be concerned primarily with safety. It is the task of the CO to temper this view with the myriad requirements he faces in order to achieve maximum mission accomplishment. Safety officers have a part in this by working for the elimination or reduction of losses to personnel and equipment and by providing the impetus so that personnel are trained to perform work correctly and quickly. Without balance, safety can become an end in itself, but this is not desired or intended.

Objection 6: "We don't really need an aviation safety program or a safety officer." In some squadrons, this might be true. The squadron that has no accidents, incidents, ground accidents, motor vehicle accidents, recreational accidents, etc., doesn't really need a safety officer. The squadron that has detailed training programs conducted by professionals for professionals also may not need a safety officer. When all personnel know their jobs, take pride in their work, and are supervised by knowledgeable leaders, a unit does not need a safety officer or a safety program. Such a command demonstrates a genuine concern that no one person can create by himself.

The attitude must start with the commanding officer and his firm, consistent commitment to do things right. The attitude filters down through the department heads and supervisors as they are made aware of their responsibility for the safety of the personnel in their departments. Finally, it permeates the entire command. The result is that every man becomes a safety officer, responsible for his own actions and with a clear understanding of this responsibility. No, this command does not need a safety officer; it has 300, with the first being the CO. For all those commands that have not yet reached this state of awareness, someone is needed to remind people of their responsibilities in this area. The squadron safety officer can provide the knowledge, education, and leadership to stimulate the creation of the command evnironment described above.

In summary, all of these objections are a perception of the persons speaking and tend to be shortsighted approaches by individuals who really don't understand the real purpose of the safety program. Their goal is generally to do more quicker, not better. If we in naval aviation are as professional as we insist that we are, then safety must be a part of our actions. It is part of doing things the right way, and if you don't feel that way, maybe the problem is yours and not the program's. Safety is only one of the necessary tools which effective managers must use in accomplishing the mission. It is not and should never become a roadblock to prevent such accomplishment.

LOOK OUT!

Midair collision in the CV pattern

By Richard A. Eldridge
Reprinted from August 1982 Approach

"I THEN told the air boss I was overhead at 21,000 feet, dirty, with only one nosewheel tire. He told me I'd be recovered last. My recovery began at 1530. Taking up a heading of 240 degrees, I flew away from the base recovery course of 060 degrees. At 12 DME, I started a 2,000 to 3,000 fpm rate of descent with 180 knots, gear down, and flaps up. At 15 DME, 16,000 to 17,000 feet, I felt a heavy impact on my port wing and fuselage. I was looking out my starboard canopy at the time of impact. I then looked to port and saw an F-4 trailing a large amount of debris pitch up about 500 to 1,000 feet in front of my aircraft. The planform view that I saw of the F-4 was with the starboard wing slightly down (15 to 20 degrees). Before I could focus to make out any specific features, my aircraft departed to port.

"I seemed to be spinning, airspeed indicator showed zero, and altimeter read 15,000 feet. The controls were still movable, but I felt no reaction from the inputs. I put in antispin controls and then looked to see what the damage was.

"My port wing was badly mangled. At least one-half was completely gone, along with the MER from Station 1. Altitude was 13,000 feet, and at this time I decided to eject if I passed through 10,000 feet. I transmitted a Mayday at approximately 1532. The departure and spin were mild initially. Then, things progressively got tighter, with intermittent negative G and nose tuck. Passing 9,000 feet, using the upper handle, I ejected. I estimated my wing position to be 90 to 120 degrees angle of bank.

"I didn't see the F-4 during any of this evolution. Seatman separation was normal. I inflated my LPA, took off my mask, deployed my seatpan, and checked for the position of my Koch fittings and the condition of my chute and risers. I released my chute when the raft hit the water. I swam to the raft, disconnected my seatpan, and climbed in."

The A-7 pilot was rescued uninjured and returned to the carrier by a SAR helo. Unfortunately, the pilot and RIO of the F-4 failed to survive this tragic midair collision and were probably killed at the instant of impact.

The A-7 had launched at 1339. Just after being catapulted, the pilot was informed that something had dropped off his aircraft. An airborne inspection by another aircraft revealed that the port nosewheel tire was missing. For the rest of that event, the A-7 was held overhead the carrier in a dirty configuration until its 1530 recovery began.

Air intercept control was the F-4 crew's assigned mission. They were to be controlled by one of the screen destroyers. Following a normal launch at 1525, the F-4 switched to the CAP control frequency of a DD. When the RIO checked in, the DD controller did not acquire radar contact with the F-4 due to the large number of aircraft in the VFR pattern near the carrier. A transmission by the F-4 requested a Link-4

Do you need an

check from the controller. The F-4's final transmission acknowledged the DD's Link-4 status. This was 45 seconds before the midair.

In looking at the mishap, the most logical explanation was the failure of the F-4 crew to visually acquire the A-7 while climbing VFR. From what little debris was recovered from the two crash sites, evidence tended to corroborate that the F-4 struck the A-7's port wing from below and behind the A-7.

One factor possibly contributing to the mishap was the elevation of the sun. The A-7 would have remained in the same relative position in the F-4's windscreen all the way to impact, with the sun's position at the same constant bearing, although a number of degrees higher.

There was little likelihood that the A-7 would have observed the F-4 approaching from below and behind. Normal scan pattern in a holding situation would devote a minimum of attention to the rear quadrants.

Lack of significant damage to the A-7's Station 2 and 3 pylon fairings indicated the most probable point of collision was at Station 1. Since the wings of the F-4 presented a normal planform appearance to the A-7 pilot following impact, the point of impact was probably not in the wing area. It was later speculated that the impact occurred near Station 1 (MER and 6 Mk-76s) of the A-7's left wing and the F-4's forward fuselage area. This impact probably resulted in incapacitation or death of the F-4 crew and damage to the cockpit areas, precluding ejection.

No one's ever stated that aviation operations in the vicinity of an operating carrier aren't extremely demanding. Lookout doctrine is something which may not be given conscious attention at all times, but aircrews must be intensely aware that a midair collision is always a possibility, especially within the area of the carrier's traffic patterns. Lookout doctrine must continue while you're conducting other postlaunch functions such as combat checklists, fuel transfer checks, and ECM or weapons systems checks. The aircrew has the ultimate responsibility for collision avoidance, regardless of any control they may receive. This aspect of safety should receive special emphasis while flying in a high-density traffic area as typified by the 25-mile radius around an operating carrier.

The limitations of the see and avoid concept as applied to high-speed tactical aircraft with complex systems requiring extensive head-down cockpit time have long been apparent. Therefore, air traffic procedures in high-density traffic areas must be designed to minimize the opportunities for VFR conflicts. Due to the large number of aircraft present during launch and recovery operations, there's no environment more needy of conflict-free traffic rules than Case I operations around a CV. ◄

e! any more convincing that you've got to look out to stay alive?

ELIMINATING the wife error

By Jackie Starmer
Reprinted from December 1969 Approach

EVERY Navy wife knows that keeping her everlovin' happy and content is her primary duty in life, and that any additional duties thrust upon her, such as bearer of babies, pumper of bicycle tires, and dispenser of meals, medicines, and money are strictly her own puddle of mud and fer gawd sakes don't splatter Hisself with family problems, particularly before he hits the blue. And if this were fact instead of wishful fancy, all aviation safety officers could retire to Peru and raise wart hogs.

Since it has long been the contention of aviation safety officers that preoccupation with family problems oftentimes causes upset aviators to bend or even bust their birds, which in turn causes everyone from the commander to the guard at the gate to get in a royal snit, it is obvious that something has to be done to eliminate the chain reaction resulting in "pilot error," or if you prefer the more honest term, "wife error."

And since it is impractical to abolish existing Navy marriages, and wives will innocently or otherwise continue to muddle up Hisself's mental state before, during, and after missions, it is suggested that a mandatory indoctrination course be held for the wives of all flying personnel, briefing them on the hazards of hubby's home life, with particular stress placed on the importance of *Twelve Hours Twixt Fight and Flight*. Naturally, this course should be taught by a highly qualified instructor – someone with years of intimate knowledge and experience in creating these hazards . . . me, f'r instance.

Having been a veteran Navy bride for 17 years, I have been thoroughly orientated, indoctrinated, inoculated, and regulated in all things military . . . I wear white gloves through receiving lines; I demand crew rest after berthings; I medicate my family with the standard Navy prescription of APCs and orange juice for every ailment from vertigo to obese ear lobes; I have never driven a *Follow-Me* jeep into a parked aircraft; and above all, I keep a calling card tray near the front door – where it seldom collects anything but cigarette butts, box lunch can openers, and balls of rug fuzz. The important thing is, it's there.

It seems that in spite of this excellent Navy training and background, as a perfect wife, I ain't much. I found this out, thanks to the snide remarks of an aviation safety bohunk whom I shall bite in the neck at the first opportunity. Now, I'm actually aware that Hisself should go beanless before a mission, but how was I to know that rutabagas are lethal? There's not one word in the aviation safety manuals

concerning rutabagas! It seems that rutabagas cause Hisself's gastric juices to overgast something fierce, particularly when he's shooting landings, and the high cholesterol content riles up his fatty tissues to a fare-thee-well, also particularly when these two evil forces collide in or around the old gump's pituitary, well . . . all hell breaks loose. And because of this slipshod oversight by safety manual writers, one airplane is AOCP for a year, the runway is undergoing extensive repairs, and a mangled S-2 tire now reposes in my living room as a plastic-covered hassock.

Aside from being responsible for the home menu hazards, there's no doubt that we wives are held accountable for the daily problems of marital bliss that mayhaps miff an aviator to the point of being a potential wing-buster. Contrary to popular opinion, Hisself does not become a snarling beast only when his flaps won't flap, or his rudder won't rudd, or he wasn't promoted when he by-gawd shoulda' been . . . no, these routine problems don't put our "sky kings" into an accident-prone mental state.

Actually, it's the little things that cause Hisself to come unglued . . . which is why a wife should always check the flight schedule before she indulges in an indignant account of why she turned the hose on the commanding officer's wife this morning, and just who does she think she is anyway! And say, did I mention that Junior stuffed a prune up his nose and don'cha know that he won't get that scuba diving scholarship since no one can scube with a maimed nostril, and that the bank should oughta hire bookkeepers who can add because we can't possibly be overdrawn *that* much.

And many a wife has been the cause of a feathered engine or, at the very least, a kinked relief tube, because of her unguarded reactions to Hisself's blue funks, which usually develop in every normal husband at two critical periods of the day – breakfast and dinner. Although the dinner hour at our house has all the serene atmosphere of the Dempsey-Firpo fight ("Git yer elbows off the table;" "Don't eat so fast;" "Clean yer plate;" "This kid will be eating with his fingers when he's 35 years old;" "Git the cat off yer lap . . ."). I would say that, of the two, the breakfast hour is the more critical period.

This is when, if we wives are to be instrumental in keeping the accident rate down, we must repress the overpowering urge to clout our roommates with their safety boots when the predawn conversation consists of, "And what cooking secret do you use to make these eggs taste like Ben Hur's old sandals?" . . . and/or "My, my, dear – you look about as sexy as a stopped-up sink in that flannel pup tent." Husbandly remarks such as these are usually the signal to square off and have at it. But to ensure a tranquil premission mental state in your sky-jock, remember to say absolutely nothing. Indignant rage and revenge can be subtly expressed in other ways . . . possibly you can jam all the zippers on his flight suit or go retch on the seat of his *Rover.*

It goes without saying that family problems occurring during an extended cruise have caused more than one airplane driver to come nose to nose with an unexpected object – like a mountain. This is a period in his life when he must be spared all worries other than will he win at bingo tonight and how soon can he get an R & R to Waikiki.

Naturally, a long cruise is a bucket of worms to the wives left sitting on their hassocks, and unless Hisself pacifies the little woman with more letters than a once-a-week note (usually as romantic as the daily bulletin and as short as commissary hours), she will discard all efforts at morale building and manage to let him know that simply because he's 3000 miles away he needn't think that kids, mumps, fights, and bills don't exist fer heaven sakes. A pox on your mental state and what about mine!

Although many a cruise widow is blessed with a husband who, though he reads fairly well, doesn't write, and has often wished that her roving roommate was as prompt and eloquent in writing love notes as he is in filing his *per diem* voucher, it is suggested that she refrain from penning any epistle to her absentee aviator that might possibly result in violent chain reactions. Since crippled aircraft beget commanders' snits; snitted commanders beget the nervous dizzies in pilots; the nervous dizzies is what begot Hisself into this cottonpickin' mess in the first place, and all on account of I wrote him the following letter:

Dear Pen Pal:

Will answer your note of 3 weeks ago before I get dressed for work. Oh, yes, I've taken a job to occupy my time while you're away. The pay isn't much but ZOWIE!! is it interesting! I'm a BOQ Housemother, 8 p.m. to midnight shift.

By the way, did I tell you that our dog is at the Vet's? No, he isn't sick; he's under quarantine. He bit that Shore Patrol honcho – the same sorehead who gave me a speeding ticket and suspended my driver's license last week when I accidentally ran through a stop sign during the change of command in front of the Administration Building and plowed into a black car sporting a monogrammed flag the size of a bedsheet. No serious injuries, except to one fella . . . he looked sorta like the admiral, but it was hard to tell with all that dirt on him. Come to think of it, it just might've been. Oh well, whoever he is, he sure has a temper!

I won't bore you with the rest of the details – except to say that the damage to our car was slight. Four hundred dollars will fix it up as good as new . . . which reminds me, the last check I wrote seems to have bounced and I guess that's the reason your name was put on some kind of list.

In closing, let me reassure you that everything is under control here at home and no need for you to worry. Fly safe and keep in touch, pal.

Your everlovin' wife

P.S. Whaddya know! It was the admiral!

Like I say, something has to be done to eliminate the "wife errors" resulting in accidents. And it is the everlasting credit of one particular aviation safety officer that he tried to do his part in preserving the accident-free record of his outfit. However, because of his own devotion to duty in attempting to erase "wife errors," the poor bohunk was medically discharged with unusual injuries – neck bites!

The seat went off with a loud bang, and I zoomed into the darkness.

Into the Island

An NFO's eye view

By Lt Michael C. Wade
Reprinted from March 1983 Approach

WINDY and choppy seas surrounded us as we walked on elevator No. 2, where our EA-6B *Prowler* was spotted for the 1800 go. The sun had just set, and I knew we were facing a black, moonless night. We were slated for a routine night ECM raid against the USS *Richmond K. Turner* and a dark night would aid us in avoiding fighters. I was flying as ECMO 2 in the right rear seat of the aircraft. Our crew consisted of a nugget ECMO 1, experiencing one of his first Case III launches, an experienced pilot and me, a second-cruise Lieutenant.

We'd just returned to sea from a long Christmas stand-down in Naples, Italy, and this was our first night flight in more than three weeks. Our brief was thorough, and we, as a crew, had elected not to wear our wet suits because the air/water temperature was one degree above NATOPS minimums.

Preflight in the gathering darkness was normal. I checked the top of the aircraft, the ECM pods and then strapped in. The engines were started, checklists performed and radio checks completed expediently. While we waited for taxi directions, I noticed that the ship was now rolling and pitching quite heavily and thought to myself that it would be a hell of a night to punch out. Our turn came, and we armed our seats and taxied in line for catapult No. 1. By now the darkness was complete.

Sitting behind the catapult, something came over me and I began to prepare more meticulously than usual for the coming shot. I'd never been unprepared, but I'd become a bit careless. Tonight I arranged my LPA perfectly and positioned my toggles where I could find them quickly. I adjusted my ejection seat, positioned my arms and legs and gave my lapbelts and torso harness an extra tug for snugness. Finally I located the lower ejection handle and locked my harness.

The whoop and an S-3A careening off the cat ahead of us and the bang of the piston hitting the water brake signaled our turn. We taxied forward onto the cat and went into tension. I heard the engines spool up to full power, our ECMO 1 finished the takeoff checklist and the pilot signaled for launch. I braced for the acceleration, but we delayed momentarily while the cat officer waited for the bow to come up in the swells. I felt a bump and momentarily felt acceleration, but as suddenly as it started, the G-forces slacked and we were moving down the catapult track far too slowly for takeoff. My first reaction was disbelief — that I was really having a nightmare. But I came to my senses quickly and realized that the cat had somehow failed and was probably pulling us slowly off the bow.

The rear seat of the EA-6B contains only one instrument, an altimeter, and allows no forward vision. I looked to the right and left and saw only blackness. The aircraft was still moving forward at full power, though, and I figured we had three or four seconds before the bow. I heard the pilot say *get ready* over the ICS, and without hesitation, I pulled my lower ejection handle when four seconds had passed.

The seat went off with a loud bang, and I zoomed into the darkness. During the ascent, I instinctively began performing IRK (Inflate-Release-Koch), my low-altitude version of IRSOK. I remember feeling my LPA inflate as I neared the silent apex of the ejection arc and then the comforting bang of the chute snapping open in the wind. Hanging in my chute, I turned around and found myself 200 feet above the bow, facing the ship and a flight deck crowded with airplanes. Things began to happen quickly as my chute, buoyed by a 50-knot wind, accelerated me into the island. I dropped my raft and braced for a collision with the superstructure. I saw the yellow deck lights close with a blur just before I felt the sharp jerk of my canopy snagging

BRader

Things began to happen quickly as my chute, buoyed by a 50-knot wind, accelerated me into the island. I dropped my raft and braced for a collision with the superstructure. I saw the yellow deck lights close with a blur . . .

something above, twisting me around and slamming me into a steel bulkhead. I hung briefly, the wind knocked out of me, then dropped like a stone.

Because it was black below, I knew I was over the water, so I released my chute, crossed my legs, folded my arms tightly over my chest and straightened my body so I'd hopefully hit either feet first or head first. I was concerned about getting knocked out, bursting my LPA or breaking a limb. I entered the water feet first, almost vertically, and in spite of my LPA I stayed under for several seconds. Those moments under that cold black water were chilling to the marrow, and every molecule in my body strained to get me to the surface. When I broke the surface, my raft was floating a foot away and my chute was gone. (Later I learned that I'd collided with the aux conn of the navigation bridge and fallen 100 feet to the water.) I was heartened when I realized I'd ejected safely, survived both a collision with the ship and a 100-foot fall and was now floating with a good LPA/raft, clear of my chute and four feet from steel. I thought I had it licked and would be back in the ready room in a few minutes with a great sea story. So I began to let down. That was a mistake. Fifteen seconds had passed since the catapult had failed.

I swam away from the ship, mindful of the screws and turbulence. When I'd moved far enough away, I attempted to enter my raft but neglected to use the proper technique and tried to pull myself onto the raft without first attaining the proper body position. Finally, after several unsuccessful attempts, I used the proper technique. Again I was thwarted, because I hadn't removed my butt plate. (I'd left it on because I couldn't remember where the retaining lanyard was and was afraid of losing the raft.) I disconnected the butt plate and managed to enter the raft but was constantly turned out since the sea was so rough and the wind was so high. The effort of getting into the raft was tiring, and after about four or five attempts, I was exhausted. Next, my oxygen mask went slack on my face, indicating the bail-out bottle was empty. I discarded my mask and let go of my raft because the sound of an approaching helicopter indicated that my rescue was immiment.

I turned my attention to signaling the helicopter and tried to open my vest and get out my strobe. I had difficulty locating the tab in the darkness, and because I was becoming extremely agitated, I attempted to rip it open with brute force. The ship had disappeared behind the waves, and I was cut off in the towering seas. Without the oxygen mask, I was having trouble breathing in the waves and spray and I was frightened and beginning to panic. My water survival training and discipline came through, however, and I calmed myself, then methodically located my equipment in the darkness. I found my strobe and placed it on my helmet, fetched a day/night flare and set off the night end. By now I could see the helicopter working his way upwind, and my hopes soared. Six minutes had passed.

The helicopter hovered around me for some time without stabilizing, and it was obvious that he was having extreme difficulty maintaining a hover in the 15-foot seas and 50-knot winds (he also had a malfunctioning doppler). For about 15 minutes, he drifted around me erratically. At one point I glimpsed a SAR swimmer arc through the air at the end of the rescue hoist and disappear into a wave. I never saw him again, but he did manage to return safely to his helicopter, stripped of his mask and flippers. Seeing his difficulty, I feared that the water was too rough for the helicopter to effect my rescue. The helicopter began to fly upwind, then drift back, trolling the harness near me. On the third attempt, I saw it about six feet away and managed to lunge out and grab it. Unfortunately, the helicopter couldn't see that I had hold of the harness and continued to circle. I was dragged for several seconds, still clinging desperately to the horse collar with my numb fingers. Finally, during a brief pause in movement, I scrambled to the top of the collar and snapped my "D" ring in. I was now going wherever that helicopter went, but the helicopter continued to fly about, searching for me, and I was dragged helplessly behind. This nightmare continued for about a minute, and all the time I was struggling for air and concerned that I might be rendered unconscious by the beating I was taking. Suddenly the cable went very slack as the helicopter reversed course. Frantically I signaled that I was hooked up, but there was no response, and the helicopter began to move away rapidly, taking up the slack. Soon the cable snapped taught, jerking me out of the water to my knees, at which point my "D" ring mercifully failed and I fell back into the water, dazed and struggling against a wave of blackness. I knew if I blacked out for even a few moments that I would drown.

My head cleared slowly, and I realized I was alone and concluded that it had been deemed too risky to attempt further rescue. I'd been in cold water for 30 minutes now without a wet suit, and I was feeling signs of hypothermia. I couldn't maintain the huddle to conserve body heat, because I needed my limbs to swim and balance myself in the high seas. The balance was needed to control my breathing between the spray and the waves breaking over my head. I was further demoralized when I found that the violent jerk of the harness had ripped my radio loose and I couldn't even

I fell back into the water, dazed and struggling against a wave of blackness. I knew if I blacked out for even a few moments that I would drown.

talk to another human being. My hands and lips were numb, my strength was waning and I slipped to the lowest point of my life. My realization that death was near was depressing me, and the isolation was sapping my will to live. I could only see ships and lights occasionally as I crested a wave. I was dying alone in a blackness pierced only by the strobe light marking my position in the night.

After five or 10 minutes of solitude, I heard the comforting sound of an approaching helicopter and came out of my depression. I took steps to beacon my position and popped more night flares. The helicopter soon saw me and hit me with a searchlight from about 60 yards downwind. With the Aldis lamp on me, I popped two of the day-end flares to aid the pilot in determining the wind and watched the pilot creep up slowly until he was 15 yards away. There he lowered a SAR swimmer part-way down so the swimmer could signal my position to the hoist crewman, who relayed it to him. This was very successful, and soon the helicopter harness was within 15 feet of me. At this point, the swimmer leaped off the harness and swam over to me and my spirits soared.

The SAR crewman asked my condition, checked me for injuries and then started towing me back to the harness, which was drifting away. We weren't making progress toward the drifting harness, but the hoist crewman above was alert to this, so he ran out all of the cable to stabilize the horse collar in the water. We reached the harness, and both of us grabbed it and were towed a few feet before it stopped. In an instant, I crawled into the collar, the swimmer snapped us in and we were hoisted into the helicopter. We returned to the ship, and I was treated for exposure and a gash in my arm. I'd been in the water for 45 minutes!

Words cannot describe the joy of crawling into the helicopter that night, nor can they accurately assess the courage of the SAR swimmer and the skill of the pilots and crewmen. That night, both of those helicopter crews risked their lives to save mine.

Preparation for this type of mishap is the most valuable tip I can pass on. Ninety percent of what saved my life that night were things I'd done before I ever strapped into the airplane. A decision I made almost killed me, however, and that was the decision not to wear my wet suit. This was based on the preflight OAT of 31 degrees Fahrenheit windchill. We knew it would probably get colder but chose to ignore it. None of us enjoy wearing those wet suits, but if I'd been wearing mine, I might have lasted all night.

My ability as a swimmer was crucial to my survival. Not only had I completed DWEST four times in my career, but I'd served as a water survival instructor at NAS Pensacola for six months before attending flight school and was a certified Red Cross swimming instructor. The result: I was more confident in the extreme water conditions and could balance and control my breathing.

Other factors which helped me: I carried extra flares instead of a dye marker and shark repellent. My helmet was decorated with bright yellow reflective tape, and the helicopter pilot and crewman said this was the most important thing that aided them in finding me among the many lights that were in my vicinity. The helicopter pilots said they could even see the yellow reflection through the waves and spray! I was familiar with the location of the equipment in my vest because I'd accomplished a blindfold drill only 24 hours prior. Even so, more practice would have helped. I'd drilled myself relentlessly about IRSOK and was able to perform it without thinking! I'd made the decision to eject in the ready room months before. You must decide what your ejection parameters are while you have the luxury of debating the alternatives. Each of these things was crucial to my survival. In short, start preparing yourself RIGHT NOW — you can't do enough!

Finally, I'll comment on my water release technique. An article concerning this was printed in *APPROACH* recently (March 1982, "A Lesson Worth Learning") in which the author commented that he'd survived because he'd shed his parachute prior to water entry and hadn't suffered any ill effects from the 8- to 12-foot fall. I agree with him. I fell 100 feet and suffered only minor injuries, and I'm convinced that had I entered those heavy seas with my chute still attached, I'd have perished. I don't advocate 100-foot leaps, however, but advise crewmen to eyeball the flight deck and judge above-water release from that. I can't seriously envision any harm from even a 50-foot fall, and the alternative, drowning, is not attractive. I further qualify this by recommending early release only in circumstances where the survivor can clearly see and use the flight deck as a reference. Think about it.

The other two crewmembers elected not to eject. Miraculously, they were able to stop the Prowler with only a few feet left on the port bow. Regarding early Koch release, on 20 January 1983, the Naval Aviation Schools Command asked the Chief of Naval Operations for the authority to perform low level parachute divestment testing. These tests are designed to validate and standardize procedures as well as demonstrate how best to instruct such procedures. NAVAVSCOLSCOM 201443Z JAN 83 refers. — Ed.

Confessions of a CAG LSO

By Lcdr. Robert C. "Barney" Ruble
Reprinted from November 1980 Approach

FOR the last 7 years I have been a member of the elite (as we see it) group of naval aviators known as Landing Signal Officers. In this capacity, I have served with pride . . . and fear . . . and frustration . . . but most of all, with satisfaction. I have braved the highs and lows, fasts and slows, and suffered the slings and arrows of outraged pilots who were convinced the pass they just flew was an order of magnitude better than I described it. I've enjoyed the bright smooth days of Case I, where nary a word has been said and dolphins and flying fish watched from port plane guard. I've also sweated out the black, featureless nights on a pitching deck when everybody out there had vertigo and it took everything I had to keep my voice an island of calm in the darkness. Well, in a couple months I'll be waving aboard the last night tanker for the final time, hanging up my pickle switch, and becoming the most obnoxious of all things – an old LSO. The other night as I was listening to yet another impassioned argument from a pilot who "really wasn't low," I decided to sit down, break my vow of illiteracy, and share some observations on this business of landing on aircraft carriers.

Having been a psychology (read: beer) major in college, I tend to look at the human side of man/machine interfaces, of which, making a carrier approach in a high-performance jet must certainly be considered one of the most complex and demanding examples. The pilot must observe the ball position, his angle-of-attack, and his lineup. He must then make stick and throttle corrections which are by no means natural and which demand a certain amount of attention, even for the most experienced among us. The attention thus diverted is taken directly from that which was being used to observe meatball, lineup, and angle-of-attack. The pilot is, in fact, brought hard against the limits of human capability. Thus it is not uncommon to find that even though the pilot was looking at the ball (as opposed to spotting the deck), he wasn't *seeing* where it was.

The nature of naval aviators does nothing to ameliorate the situation. What aviator worth a hoot doesn't believe, deep down, that he's the very best? We are a competitive breed, and each carrier pass is viewed as an opportunity to demonstrate that we have the right stuff. This excessive desire

"What goes up, must come down."
– Sir Isaac Newton

"You know, Jane, it's always something."
– Rosanna Rosannadanna

to get the OK pass can interfere with accurate perception, however. I know there have been times when I've rolled into the groove, congratulated myself on a good start and felt like I had an OK pass wired. But, a second, more objective glance at the ball revealed that I was actually low. Recently, we had a minor lens malfunction wherein the cell just below the center cell was oscillating in intensity. It was educational to debrief all those pilots who claimed they had a centered ball, but complained that it was flashing.

How does one deal with this problem? The first step is awareness. Personally, I've tried to train myself to fly a perfect pass for its own sake, rather than making an assigned grade of "OK" my goal. Maybe this is a subtle difference, but the idea is to become one's own severest critic. Establishing this attitude promotes accurate perception and better feedback, which is the foundation of efficient learning. Recognizing that not everyone will share this philosophy, I have, at intervals, suspended the assignment of grades in the air wing to take away the pressure of competition. It's amazing to observe the increase in agreement between pilots and LSOs during debrief on a day when it is known in advance that passes will not count for Golden Hook competition.

Another perceptual problem frequently encountered is the **Nugget Syndrome** – the tendency, especially among new pilots, to settle below glidepath at night. Commonly, a pilot will feel high and/or overpowered on a night approach when, in fact, he is exactly on glidepath. This is due, in part, to a lack of peripheral cues, but also stems from anxiety about boltering. The settle leads to power calls from the LSO, the pilot then sees that he is low, stiff-arms the throttle and performs a low, flat bolter. The only cure for the problem is experience and convincing the guy that it's not the high in-the-middle that causes bolters but the low, flat in-close.

Now, let's look at the whole process from the other end – from the platform. The LSO is as dependent on accurate perception as the pilot. While Paddles doesn't have to divert his concentration toward coordinating stick and throttle movements, he does have to perform the tricky maneuver of translating nonverbal (right brain) perceptions into logical, verbal (left brain) form for recording in the grade book. Again, the limits of human capability are neared. Paddles, too, can fall prey to perceptual distortions of the sort that afflict pilots.

First, as a controlling LSO who is more than likely still learning his job, he is under pressure to prove his "eye" to the team leader or the CAG LSO looking over his shoulder. Second, especially at night, he is just plain scared of a ramp strike. In the former case, the desire not to miss anything will have the effect of magnifying small deviations in his mind, thus making the pass seem worse than it was.

The answer here is to develop self-confidence. I accomplish this by being as quick to praise as to criticize and, now and then, taking away the pressure to assign a grade by occasionally having all passes graded by readyroom kibitzers utilizing the PLAT. The latter problem promotes the "high eye." In other words, the airplane in the groove at night, especially approaching in-close, represents a threat to the LSO. Unconsciously, the LSO alters his perceptions to lessen the threat and perceives an aircraft that is actually high to be on glide slope. Similarly, an aircraft coming down from high in-the-middle appears to be settling. This is a tough one to counteract; the cure requires continual feedback from the CAG LSO and the development of self-confidence. I also try to direct LSO attention to pilot technique (i.e., drop nose, rough wings, ease gun, etc.) rather than strictly aircraft positioning.

The upshot of the whole discussion is that it is very easy for misunderstandings to occur between pilot and LSO, with consequent derogation of training. It takes a recognition of the pitfalls by all concerned and a sustained effort by the LSOs to counteract them to give each pilot the best opportunity to become a good, and consequently safe, ball flier. However, being a loyal and true LSO, you can imagine with whom I side in any readyroom disagreement, the aforementioned principles notwithstanding. He may be a dirty SOB and an unsuitable date for your sister, but friends, he can save your whole day! **The LSO is always right!** ◄

Shock Value

By Lt. Colin Sargent
Reprinted from August 1983 Approach

IT was a simple twist of fate. In spite of his 3,500 hours, LtCol. Greg L., USMC, had never landed on a carrier at night.

Not even in T-2s back in Pensacola, 16 years earlier. Like most naval aviators, he remembered Pensacola as a blur. Spanish moss, the Seville Quarter, programmed tests, carrier qualifications, that blonde in the cinnamon dress . . .

Tomorrow night, it would all be real. In truth, he was a little nervous. For 16 years he'd flown in land-based jets, never logging a day of carrier duty.

Was that possible?

Sure. He had plenty of buddies who'd done the same thing. Not intentionally, mind you — it was just the breaks of the squadron assignment game.

Besides, he was *king of the dry runs;* as the squadron's CO; he'd landed on more painted FCLP carrier decks than he could shake a stick at.

Things were always more certain when they were make-believe.

He looked around the ready room. Some of the younger pilots were on edge, too. It was the Intruder squadron's first deployment ever on a flattop, and none of the Marine fliers had recent carrier experience.

Greg L. wished more than just one junior crew of Navy bluewater pros had been assigned to the squadron to add a dimension of corporate carrier memory, but that hadn't happened. There was no one he could really shoot the breeze with. He'd been having a little trouble flying the ball to touchdown lately during FCLPs.

But what the heck. Even though the FCLP LSOs had taken him aside and warned him about spotting the deck, he was ready, more than ready. These prelaunch doubts were reserved for nuggets, anyway.

And thankfully, he hadn't been treated like a nugget during the carrier workup, even though he had less recent carrier experience than an average nugget would have, fresh from Skyhawk traps.

When he'd made a mistake in the FCLP pattern, for example, the instructors had taken him aside joshingly, cheerfully and, with his silver leaves reflecting in their eyes, had begun their soft-core admonitions with, "Now, Colonel . . ."

Nuggets getting debriefed were familiar with a different tone of voice.

He drank a glass of cranberry bug juice, said good night to the guys and headed for his stateroom. With any luck, he'd soon be asleep.

Propelled by gigantean shafts, the carrier moved inexorably into the night, into the Colonel's black future.

Twenty-four hours later, he was in the sky, flying a night approach. An earlier day hop had gone passably, but now, both he and his first-tour bombardier navigator were recovering from vertigo they'd experienced during Marshal holding in IMC aft of the carrier. In spite of the vertigo, neither he nor the bombardier navigator had broken down and owned up to it on ICS. Now they were VMC beneath the overcast, on their way to touchdown.

They didn't know that residual effects from vertigo can last up to 60 minutes, even if you think you've shaken them off.

Greg blinked his eyes and remained on glide slope. The infinity outside was black, rushing with waves, swallowing him.

On glide slope.

On course.

He was flying the ball beautifully.

In 11 seconds, he was going to die.

He was past the wave-off point now, flying the ball.

In seven seconds, he was going to . . .

Everything was gorgeous, except for one thing. He took his eyes off the ball, spotted the deck and pulled a bit of power. It was a simple mistake, something anyone who lacked situation awareness might do.

In three seconds, he was going to . . .

The LSO's screams were too late. The bombardier navigator heard Greg say, "Oh, no!" quietly as the Intruder hit the ramp, exploding into a ball of flame.

No ICS communication had occurred from the inclose position until Greg's stunned "On, no!" triggered the bombardier navigator's successful ejection. The Colonel stayed with the aircraft as it scraped sparks and metal across the deck and went over the side. He couldn't move a muscle. He was so surprised, he wasn't ever sure he'd hit the ramp. His delay in ejecting was probably a function of late recognition. Had either crew member determined that the aircraft had struck the ramp and communicated that fact, the ejection might have occurred earlier.

Greg might have lived.

But even then, he wouldn't have dared to tell anyone that he'd had doubts about his ability to trap aboard a carrier 16 years after initial qualifications.

He'd have looked his friends right in the eye and said, "Sure, bubba. Just a bit of bad luck. No problems. We'll get it next time."

And nervously, the bubbas would have laughed and agreed, wondering how Greg could be so strong and hoping it would never happen to them.

This article describes a composite of different mishaps, and LtCol. Greg L. does not represent any mishap pilot, per se. As we build to a 15-carrier air wing Navy, it is probable that more and more Marine Corps squadrons will be deploying on CVs. The problems depicted in this story have happened in the past at one time or another, and we are open for history to repeat itself. — Ed.

I was leafing through my Funk and Wagnall's the other day and chanced across a really great word. It's just below "anthropophagi" (which means two or more cannibals), but this isn't going to be a lecture about cannibals and what to do when you meet them in a survival situation, Here's the word. Write it down and you will astound all your Air Force friends. The word is:

Anthropopathy

By Lt. W.J. Mooberry
RVAW-120
Reprinted from April 1970 Approach

BEAUTIFUL, isn't it? Now for all the Yale men in our audience, I feel I must explain, anthropopathy is not a single cannibal. Anthropopathy is the tendency some people have to attribute human feelings and passions to gods or objects. Since gods and their passions are more properly the territory of the Chaplain's Corps, I'll limit our discussion to that anthropopathy which is directed toward objects; in this case, flying objects.

My research has indicated there are roughly two phyla (another great word) of flying objects: the animate and the inanimate. (Wake up, Norman, here comes the topic sentence.) You, good friend, along with gnats, birds, and certain species of squirrels are one phylum, and your aircraft is the other.

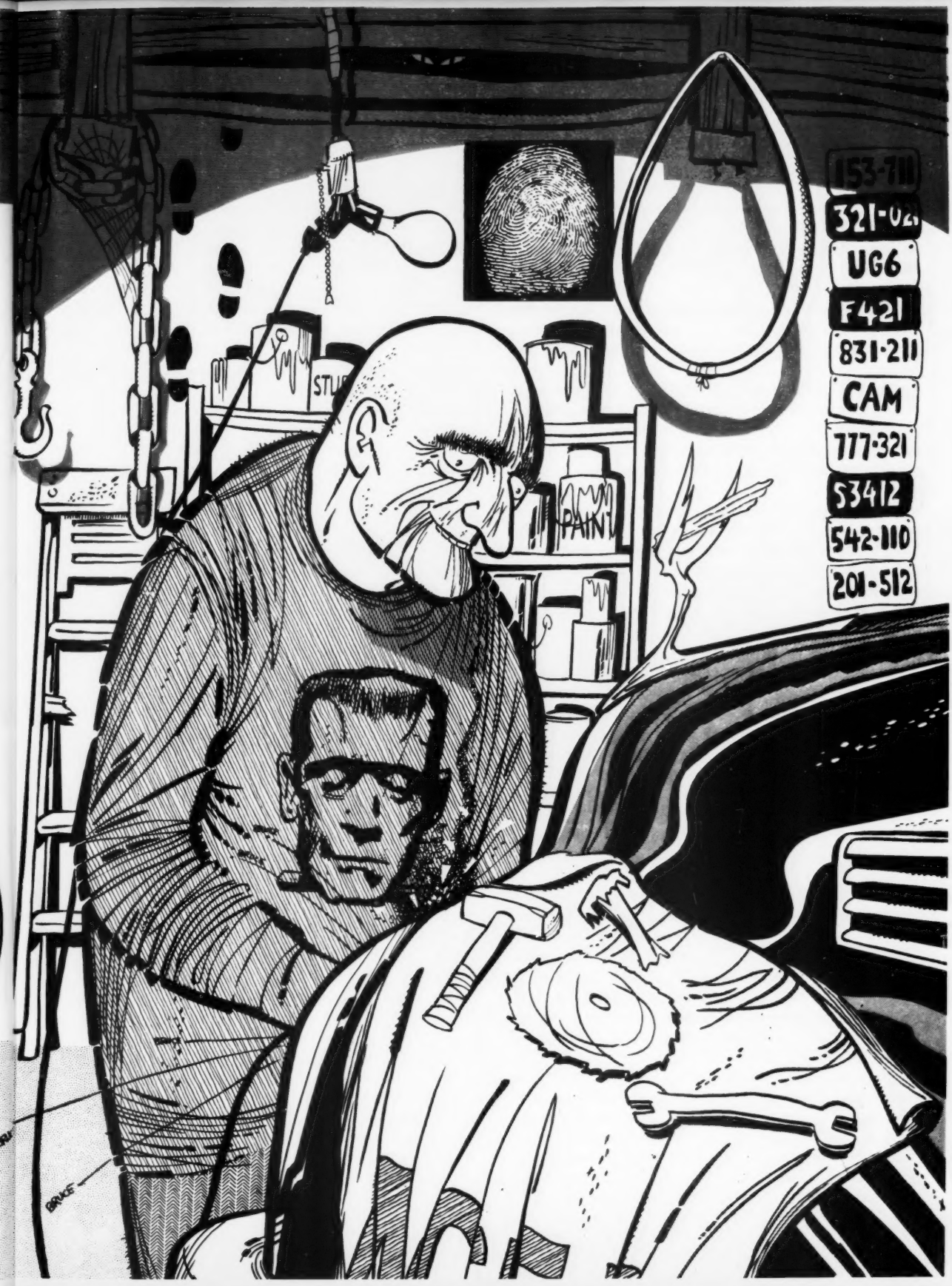
If you believe that, you may leave now. If you don't believe that (or if you are experiencing a serious blockage of the lower tract and have to sit there anyway), read on.

One of the finest examples of contemporary anthropopathy I've ever seen was in a movie called "Sweet Betsy." It starred Van Johnson as a freckle-face 26-year-old Air Force colonel (twice passed over for brigadier) who thought his B-17 was a nubile young girl named Betsy. (A complicated Freudian hangup which could account for some of his career difficulties.)

I can close my eyes and see it all in living color, wide screen and stereophonic sound. As the scene opens, Johnson is nursing his battered, limping bomber back across the channel. Eight feet of his starboard wing have been shot away during a predawn raid on the Jerries' roller skate factory near Berlin. His Huck Finn smile and 9 million freckles were of little help over the heavily defended target; Betsy took a hell of a pounding. She's down on the water now skimming and sputtering along just above the top of the waves. The rest of the crew has long since bailed out. But the colonel knows Betsy will see him through. She always has.

Sweat streams from his forehead. His teeth are clenched. He squirms in pain. (The Huns have shot away his relief tube.) He looks up. Dover is just ahead. He smiles for the first time. The cliffs gleam white in the early morning sun.

He speaks. "Come on, Betsy girl, we've made it this far . . .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just a little more. Come on, Baby, climb!" He pats the instrument panel. The aircraft shudders. Ecstasy, or prestall buffet?

His mind wanders back. What was it that Guido, the gunner, had said just before he jumped? "Anthropopathist!" Yeah, that was it, just before he jumped. Crazy guy, always so touchy about his religion. He wipes the sweat away. The cliffs are closer now.

"Just a little more, sweetheart. We're gonna do it. Climb a little, Sweet Betsy. Betsy, Climb!"

Splurch.

Paul Lynde, in the role of an out-of-work LSO, watches all this from the top of the cliffs. He reaches into his back pocket, pulls out a little green book, scratches his head, and writes:

(OK) LOX LOAW (DECIC) P RAMP STRIKE!!

As the curtain falls, Lynde is silhouetted against the early morning sky, still scratching his head, and the camera zooms back to reveal a blackened blot on the white cliffs of Dover. All that remains of Sweet Betsy and the good colonel is a smoky hole.

Too bad about the colonel. Guido, the gunner (and part-time religious fanatic), was right. The colonel, you see, thought these galloping, wheezing, snorting, inarticulate conglomerations of sheet metal, pulleys, and force vectors that we call aircraft have souls. They don't.

A good moral for the movies, you say, but what about real life?

Okay, Norman, real life:

You win the baseball pool, and with the money you buy the very best electric handsaw you can get. You love your new saw. You name it Bruce. Your slightly squirrelly neighbor comes by to borrow your new saw. You've watched this cat try to shovel snow with a tile spade, so you follow him (surreptitiously) to make sure he doesn't bleed to death when he saws off his kneecap. You peer through his garage window.

He plugs it in and waits a second or two as the saw comes up to speed. (So far so good.) You smile.

But suddenly he screams, "Come on, Bruce! Come on, Bruce baby! Attaboy, Brucie, you can do it." And tries to cut the bumper off his '49 *Packard*. By the time you get inside, little Bruce is a smoldering, toothless lump.

Real life is exactly what we're talking about. Airplanes are machines. They are different from people. They don't care if *they* live or die. They have ultimate tolerances and design limitations which are set forth by the immutable laws of metallurgy and physics; they are constant and irrevocable and will remain so regardless of how much you wail or plead or pat their instrument panels and call them "Baby."

Little Bruce tried to cut the bumper off that *Packard* just like Sweet Betsy tried to fly over that cliff. And they kept on trying. Bruce kept spitting sparks and teeth until there was nothing left. Betsy kept flying until shortly after her *Plexiglas* nose turret met that chalky white wall. Why? Not because they loved us. Because they were machines and had little control over the tasks their operators assigned them. They performed those tasks until those tasks destroyed them.

Phate? Nope. Physics in both cases.

What's it all mean, doctor?

Well, son, it means that the next time you figure you'll swagger out to the line and give old Betsy a swift preflight with the steel toe of your aviation sneakers and then take her up for a quick dash along the edges of the performance envelope, *stop!* Rub your eyes like a baby who just woke up, and take another look. That's really not old Betsy there. That's naval aviation lifting device number 152786. A really dumb machine. You can paint teeth and faces and names all over it and nothing really changes. It's still a mindless machine that knows only what you tell it — honest!

Anthropopathy kills.

"How come our planes always hit prize hybrid grain and never the inexpensive kind?"

Remember how much fun flying used to be?

By Cdr. R.P. Brewer
Reprinted from May 1961 Approach

THE current spate of nicotinic nostalgia offered in TV commercials ("Remember how good cigarets *used* to taste?") moves us to note briefly the recurrent, similar flashbacks in flying, in which we elder pilots are prone to indulge.

Such harkenings back to yesteryear usually are prompted by the appearance of new instructions and procedures which seem to be fiendishly designed to remove the last vestiges of enjoyment from the aviating business. Whereupon there is loud lament concerning the state of aviation nowadays, and considerable listener sympathy is aroused on hearing . . . "Why, bub, when *I* was an ensign, fresh out of Pensacola . . ." and thereafter you're regaled with heart-stirring tales of how they used to leap into the blue — the near-deserted blue it was then, unmarred by the flicker of anticollision lights, uninhibited by the insidious influence of IFR and the prying eye of radar surveillance.

Then, the "famming" pilot of, say, an F6F might roam the high (2-10,000 feet) sky in search of new transports (NATS) questing the dimly defined air trails for kindred spirits, perchance to scissor them into satisfying two-turn spins over Old Smokey (Pittsburgh).

Or to stalk, gleefully, an unwary "wrappie" (Army Air Corps) citizen. Or, remember the high-spirited antics that greeted you in your first squadron, when you swelled with pride to be invited along on a "freezeout" tailchase under the Old Bridge — how the lowly earthbound peasants shrieked with awe, or something, as you buzzed down the highway — the beauty of the perfect man-machine team marred only occasionally by encounters with high-tension wires. Yessiree, those were the days, ehh? None of your *fancy dan* flight planning for that hardy breed — "Gimme an Esso map and a city directory, buster, and I'll get there!" A rolling takeoff, tuck up the *Goodyears* (or was it *Firestones*), and a neat roll before passing the end of the runway. "Meet me over the field."

Man, that was living. Now? Hah! Why even the carefree chatter of the past has been replaced by your stodgy, uninspired radio discipline. Remember the way we used to pull the hilarious "Who dat? Who dat, say who dat?" routine that used to sizzle CAG when he was trying to rendezvous the group grope?

No sir, things just aren't the same. The sublime satisfaction of sneaking in under the overcast . . . "Cheeze! I got a hatful of pine cones outta my oil scoop!" They've taken the individuality out of the business . . . A good LSO could recognize every pilot by the peculiarities of his pass; all different — but no more. CAA and the mirror approach changed all that, along with the heady joy of the high-speed break.

Navigation? Just get out and go, we did, into the chute-pinching thrill of a low-frequency range orientation, without a chart. TACAN and OMNI and radar and UHF do the job for you now, but then, no tiresome requirements of position reports and altitude assignments and nagging safety officers — Dilbert cartoon were good enough for us.

Yessir, they'll say, give me the plain, simple life, uncluttered with checkoff lists and V_g diagrams and FIRs and computers and such. Shoulder straps? Who wants to fly in a strait-jacket? Crash helmets? Sonny, we were a real hard-headed group, when the measure of a pilot was his ability to sideslip off a buggered-up overshoot; to horse a reluctant bird off the runway in jig time; to interpret a 200-mag drop as a transient bit of water, and let's get the show on the road!

Those were the days, indeed. It was a great life, the likes of which we'll never see again, those of us who are still around. And there were giants in those days too, who can still spin a wonderful yarn of a lusty era — yarns that glow more warmly with each passing year and each fond retelling. So, you youngsters, listen and learn — you can filter out a great deal of satisfying information. But there's one thing . . .

Just don't ask him what the accident rate was that year!

Risk and the Naval Aviator

By Cdr Albert S. Polk III
Reprinted from March 1983 Approach

RISK vt: . . . to expose the hazard or danger (. . . his life) . . . to incure the risk or danger . . . (. . . breaking his neck) . . .

Webster's New World Dictionary

WAY back in VT-1, students used to spend a lot of time sitting in their readyrooms learning procedures and reading *APPROACH*. VT-1 is no longer there, but the sitting around, learning and *APPROACH* are. Incidents described in the magazine often lead to interesting readyroom discussions. Any discussion will highlight a few "facts" — things we all agree on all the time. But there will be a never-ending succession of gray areas — things that some of the people agree on all of the time, all of the people agree on some of the time, but not all of the people agree on all of the time. (Sorry, Abe.)

RISK n:. . .possibility of loss or injury: PERIL . . . a dangerous element or factor. . .chance of loss . . . also the degree of probability of such loss . . .

Webster's New World Dictionary

Perhaps the most shocking and therefore most memorable discussions in VR-1 concerned Approach articles depicting *downright stupid things* pilots did. As flight students, we (generally) knew right from wrong. Students knew all aviators were smart — real smart. Not just smart, but also well educated and extremely safety-conscious. So why did these articles show our heroes doing such *stupid things?* There were some real whoppers! The only conclusion we could draw was that these must be the bottom 10 percent or so that we'd always heard about — generally those associated with a poster being passed around at the time of an A-4 about to crash inverted. We were glad we didn't do stupid things then and would never do stupid things in the future.

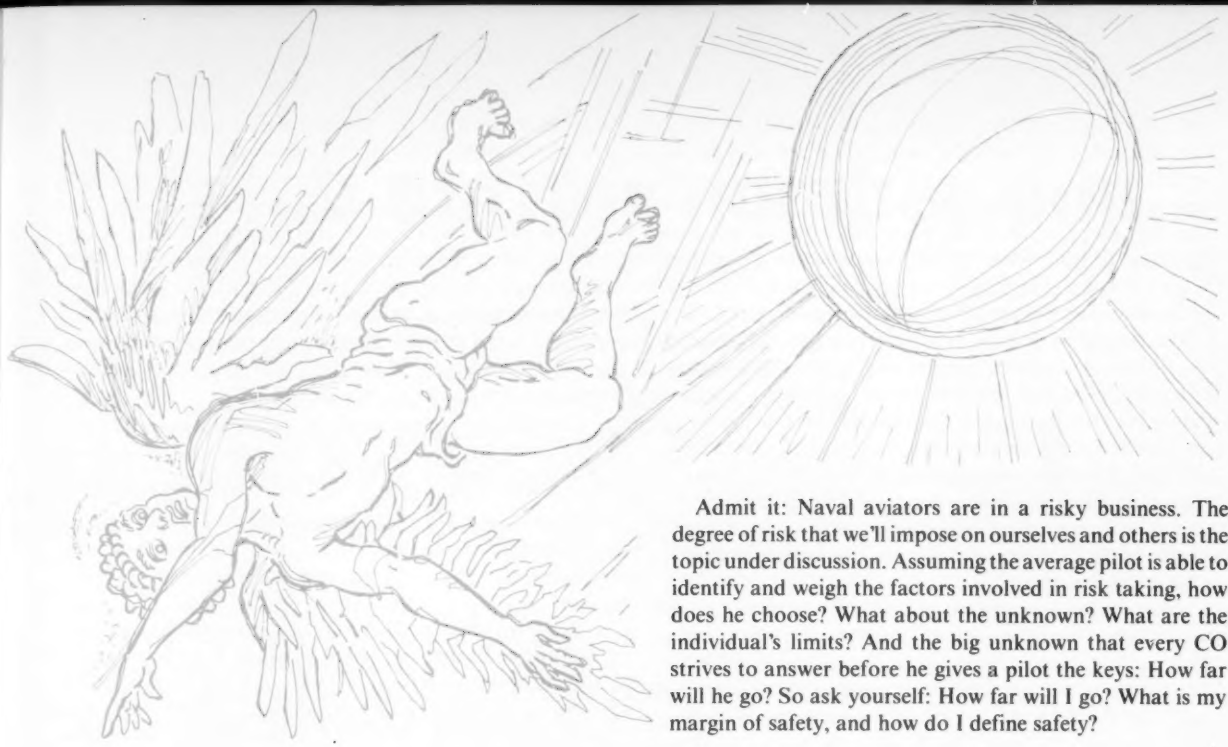
It was readily apparent to all of us (except the 10 percent) at that stage of our flying that NATOPS, referred to as "the Bible," *was* the Bible. It was blessed by our creator. Unless we wanted to meet Him face to face on our next flight, everything had to be done in accordance with NATOPS. About a thousand flight hours later, NATOPS writers became less immortal. (They were us.) NATOPS was still the savior it had always been. "NATOPS — words to live by." Even the 10 percent will not dispute this. There were, and are, other rules, standard procedures and common sense policies which should, or "shall" be followed. But for some reason or reasons, some actions occur that do not make sense, are irrational and appear downright stupid to the casual observer.

"That is a situation with which I shall not up with put."

Winston Churchill

So why, oh why do our heroes, even now, often *even aviators we know*, do such things? Why do they take risks? Risks are dumb in an aircraft. The dictionary says nothing good or smart or redeeming about risks. "Hazard . . . danger" — we don't need these in our airplanes! Good grief, flying is risky enough as it is without adding all those extra stupid things. And some of us do it over the middle of the ocean and from aircraft carriers.

If God had wanted man to fly, He would have given him wings.



Wait, What was that? "Flying is risky?" But why am I . . . ? Whoops. Am *I*, a naval aviator, taking a risk? Not long ago, my wife was confronted by the following statement upon being introduced to a nonaviator's wife: "Your husband is a pilot? And he isn't dead yet?!"

There are old pilots, and there are bold pilots, but there are no old, bold pilots.

We do have what many would consider a risky, hazardous or even dangerous occupation. This is always pointed out by our insurance agents.

Flying is not inherently dangerous, but it is extremely unforgiving of human error.

In fact, only we naval aviators will ever know what we do, what our motivations are and what we'll do to ensure our lives and livelihoods and those of our countrymen. Only we will know that exhilarating thrill of victory and that often even more exhilarating agony of defeat.

"Far better it is to dare mighty things, to win glorious triumphs, even though checked with failure, than to rank with those poor spirits who neither enjoy much nor suffer much, because they live in the gray twilight that knows not victory nor defeat."

Theodore Roosevelt

Admit it: Naval aviators are in a risky business. The degree of risk that we'll impose on ourselves and others is the topic under discussion. Assuming the average pilot is able to identify and weigh the factors involved in risk taking, how does he choose? What about the unknown? What are the individual's limits? And the big unknown that every CO strives to answer before he gives a pilot the keys: How far will he go? So ask yourself: How far will I go? What is my margin of safety, and how do I define safety?

Behold the turtle: he only makes progress when he sticks his neck out.

It is now approximately five years since CAPT Dana French (a "shoe") fathered Leadership Management Education and Training (LMET). Many pilots have had the valuable risk training which is a small part of that course. In flight training, aviators learn about the limits of their aircraft and their bodies. All students practice and are pressed to experience these limits. Pressing to the max may be risk-taking training. Very little training exists in the area of risk, but it's a daily facet of our busines of flying airplanes. Aviators must strive to get the most from the OJT available.

Risks can lead to large payoffs. Conversely, they can also lead to severe losses.

In the heat of the moment, many risks are taken. After the pressing need has disappeared, these often look incredibly stupid in hindsight. Some look incredibly stupid at the time and need not wait for hindsight. Operational necessity may be valid — as in a carrier TransPac with no night current pilots and Bears inbound. The captain is going to take the risk of launching you into the night. Once that initial risk is taken, he'll do everything in his power to minimize your risk and his. He'll provide a ready deck and ready tanker. The best final controller and the CAG LSO will provide tender loving care on glideslope. Your CO has already given his assurance that you can handle the situation or you wouldn't have been on alert. The risk will be taken. Is this a "safe" risk, or is it incredibly stupid?

Consider the bombing derby. The aviators are there to

win. They have both the will to win and the will to work to win. They may not have the skill to win without taking above average risks. They may have the discipline to avoid the extra risks, knowing they may lose, or they may risk everything for the bull. What is it worth to you and to your squadron to win? What are the consequences if you lose? What if you lose everything — forever? In such a case, it may be better to lose the battle and win the war.

The intangible reward is a very popular risk inducer. Intangibles include peer pressure and loyalty. Both of these interreact with and reinforce other varialbles. Unfortunately, they tend to support the uncertainties that intelligent naval officers, left on their own, would often reject. Risks are taken based upon the uncertainly that others will appreciate the risk. Aviators must carefully weigh the possible payoff against the incredibly stupid reputation awarded by peers and the CO's writeup which does *not* refer to "the best pilot in the squadron."

Often multiple inputs are ignored, overlooked — or just not known. The risk is masked. An elevator has been stiff or "strange" for months. The first writeup indicated slight stiffness. The next said *possibly* full throw did not *appear* available with full down trim. Lots of maintenance checks have uncovered no problems. Tomorrow is the flyoff. The pilot is skeptical, but is assured by his roommate (the maintenance officer) that they're worn bushings, but they're OK for now, not available on the ship and will be replaced next week. What are the risks? Consequences? Payoffs? How will he look floating under his parachute a mile when he finds out that the proper test equipment had not been available on the ship, but when checked properly (assuming the aircraft is still available), the controls were found misaligned and the aircraft should have been hard down? Will he look incredibly stupid?

Perhaps the most shocking and therefore most memorable discussions in VT-1 concerned *APPROACH* articles depicting *downright stupid things* pilots did. As flight students, we (generally) knew right from wrong. Students knew all aviators were smart — real smart. Not just smart, but also well educated and extremely safety-conscious. So why did these articles show our heroes doing such *stupid things*? There were some real whoppers! The only conclusion we could draw was that these must be the bottom 10 percent or so that we'd always heard about — generally those associated with a poster being passed around at the time of an A-4 about to crash inverted. We were glad we didn't do stupid things then and would never do stupid things in the future.

It isn't so much ignorance that gets a man into trouble. It's knowing too damn much about things that just aren't so.

In the same flyoff situation described above, a prudent pilot could educate himself to properly assess the risk. While the aircraft could look hard down, proper prior planning could result in lessening the risk for a successful sortie. A few years ago, a P-3 was successfully ferried with only three engines installed. At the mention of such a feat, this sounds incredibly stupid. After the mission was over, it was praised as a carefully planned and executed achievement. The Wright brothers were thorough planners. The crew of NC-4 applied considerable skill in crossing the Atlantic. "Lucky Lindy" had a lot more than luck going for him. Flight planning for Alan Shepard, John Glenn and Neil Armstrong began long before Jules Verne wrote about men going to the moon. There's no doubt that the first time such flights were seriously mentioned, their perpetrators looked incredibly stupid to many. But not any more.

Consider the consequences of not taking risks. Without risks, there would be no ACM, no night carrier landings, (maybe no carriers!), no Blue Angels and virtually no flying.

"One small step for man; One giant leap for mankind."

Neil Armstrong

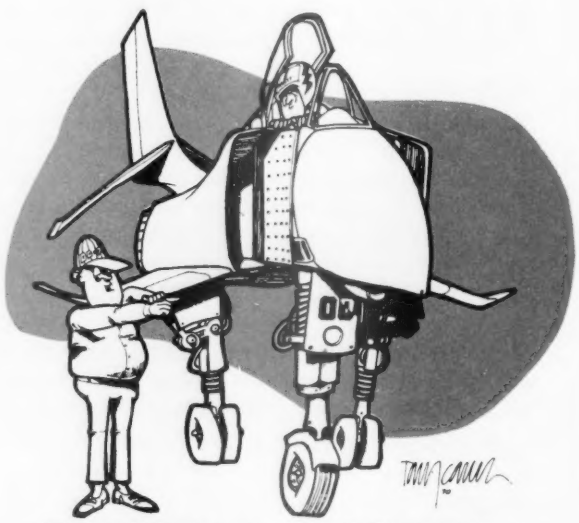
There is a great need for risk taking and risk takers. Risk is vital to the business of naval aviation. It's woven into all aspects of the profession. It's part of being a professional.

Naval aviators should be risk takers — informed, intelligent, rational risk takers. They should study themselves, their aircraft, NATOPS, tactics and SOP, then learn from the experiences of others as well as themselves. When a risk presents itself, the professional naval aviator should examine the risk carefully to avoid the casual "not me!" or "sure, I'll do it." Properly executed risk taking increases mission effectiveness while reducing damage, injury and waste of assets.

It *is* possible to take risks without doing stupid things.

"A ship in a harbor is safe, but that's not what ships are built for."

Shedd



"No, son, this is a destroyer . . . Now the ship you want is about two miles . . ."

"Watch out for number one..."

By Lcdr Paul H. Hederstrom
Reprinted from September 1983 Approach

. . . a phrase with which we have all grown up, and one which takes on new meaning to a squadron which just recently won the Safety "S."

Watch out for number one, as we all commonly understand it, refers to selfish concentration on one's own interests. This covers everything, not the least of which is our own safety and well being.

We, in the carrier aviation business, realize more than most that watching out for number one depends on mutually sharing responsibility for others. In no other occupation is it so important to watch out for others in order to watch out for number one. Whether individuals are adequately rested, eat properly, get regular exercise or have their personal affairs in order, are questions which must be answered by "me" to ensure that those individuals are performing at their peak and do not inadvertently include "me" as a mishap statistic.

Watch out for number one also connotes to the Safety "S" winners that they are on top and have exerted major efforts to remain safe. This contains the most insidious danger of all, for within this attitude lies the potential for overconfidence, inattention to detail, and worst of all, complacency. Flying the most hours, dropping the most bombs, even winning the Battle "E" does not give a unit the license to relinquish safety as a priority. This is not football, baseball or soccer where momentum can prolong a winning streak. Safety maintains no momentum in and of itself, and takes no holidays. Look back at traffic statistics for July 4th, Labor Day weekends or even New Year's Eve. It is incumbent upon the Safety Officer to reemphasize all hands cooperation in the continuation of existing safety programs and revitalization of standard, yet proven, cliches.

A much healthier attitude for the Safety "S" winner, and one which projects pride and professionalism as well as the potential toward winning other awards, is that the other guys had better watch out for number one, because "we" have every intention of winning the "S" again next year. To keep the atti de alive in the command is everyone's responsibility. The Safety Officer's responsibility, in particular, is to furnish the avenues within which that attitude may be fostered and continued.

As an aside, but certainly appropriate when discussing the setting of attitudes, the impact of administrative and support personnel must not be underplayed. This is an often overlooked facet of safety, but extremely important when technicians must be able to fully concentrate on the task at hand. When pay records are in question, or supply cannot obtain the proper parts, then attitudes and concentration suffer, followed closely by performance. The Safety "S" winner must be aware that administrative and support functions have a very positive or very detrimental effect on a safety record.

For those commands which did not win the Safety "S" this year, watch out for number one, because you will be setting the trend one way or the other during this next evaluation cycle. ◄

The Night the Lamps Go Out

(A Helodrama in Three Acts — Narration by Lord Reaper, the Keeper of the Scythe)

By Russ Forbush
Reprinted from July 1983 Approach

Prologue

DO you see me standing here before you? Of course you don't. My visage cannot be seen by the living, but be assured that I am here. I am always near when lives are in jeopardy and my services may be required. Over the years, many of your brethen have observed me standing at their sides, ready to escort them on their everlasting journey into eternity. Ever since man discovered a machine that would fly, those who fly the skies have kept me rather busy. Of late, however, things have slowed down somewhat — you're making it much more difficult for me to meet my quotas. Some like to believe it's because I've grown older, a bit heavier, shorter of breath and am less crafty than I once was, much as I hate to say it, but that's not the case. It's you who are becoming wiser, more knowledgeable, better disciplined and, thus, more professional in your approach to naval aviation. Nonetheless, I am not through yet — I still have my allies out there. I can always count on a few who will make costly mistakes that place them and other crewmembers in imminent danger. And those who maintain and support the aircraft, both ashore and afloat, will make occasional critical errors which add to aviators' woes.

The tale you are about to become privy to is a case in point and worthy of your attention. The errors of omission and commission made prior to and during this SH-2F flight are the very type that hone my scythe and hie me to the scene of action. Today an SH-2F, tomorrow an F-14 — similar errors can and do occur in all aviation communities. Now, join me as our helodrama unfolds, and you will ultimately discover what fate befalls the unwary participants.

Act I
Setting the Stage

Scene I: Synopsis

The players in our little helodrama are personnel in a LAMPS Helo Det and the ship it's assigned to, USS SMALLBOY. The ship has recently departed port and is en route to a special exercise (SPEX). Although the ship and the Det are experienced LAMPS operators, they are not familiar with each other. As is required, a one-week work-up for members of the Det and ship's crew is the first order of business. But, as so often happens (in all aviation/ship marriages), the week is reduced to two days because of other commitments. However, an assigned safety observer reviews the training conducted and, after consultation with the Det OIC, certifies the DET safe to operate. Although it may not seem significant, I would like to add that only one practice ship-controlled approach is performed during the work-up. (Further on you will understand why I make this point.)

Scene II: Preparation for the Night Flight

Except that the crew quals are current, the flight is properly authorized, the fuel and oil samples check okay and there is sufficient fuel onboard the SH-2F for the scheduled mission, other requirements for the conduct of the flight are sadly deficient, to say the least. We will dissect them one by one:

First, the pilots do not get a complete mission brief as required by NWP-42(E). Missing from the brief sheet are the ship's PIM, divert fields and their capabilities, divert ship platforms and their limitations and forecast environmental conditions. (The pilot in command (PIC) does not challenge

these omissions.)

Second, the PIC, who is also the Det OIC, releases and accepts his aircraft with known downing discrepancies for night of IFR flights over water. Specifically, the SH-2F has a degraded ASE system, rendering the heading hold inoperative.

Third, the PIC fails to conduct a complete and thorough crew brief in accordance with the NATOPS PCL. Critical items omitted include instrument approach techniques and vertigo/disorientation notification.

Needless to say, these deficiencies register with my Benefactor, and he immediately activates my beeper. Without undue delay I arrive on the scene to witness the outcome of the flight that is about to begin.

Act II
The Flight

Scene I: The Takeoffs

I occupy a heavenly position when the SH-2F launches at 2243 on the first of two ASW sorties in support of the SPEX. Much to my chagrin, however, this particular mission goes without incident and the aircraft successfully returns to USS SMALLBOY. The SH-2F launches on its second sortie at 0140. Now, I think to myself, something sinister has to happen on this flight, what with all the foulups between the ship and Det prior to the initial takeoff. This apprehension puts me on emergency alert, and my scythe is at the ready.

Scene II: The Takedown

Following the second takeoff, our *Seasprite*, which is assigned to operate within 12 nautical miles of USS SMALLBOY, steers a course toward other ships in the SPEX force. Another smallboy assumes control of the H-2 along with responsibility for its safety of flight. The force is located a few miles east of a coastline. Initial visibility is 10 miles. Fog is predicted by the weather folks around daybreak, some two hours after the scheduled landing of the H-2. Are you, my audience, thinking what I am thinking? If so, you're right. During the one and one-half hour period before the aircraft makes its initial approach to a landing onboard SMALLBOY, the fog moves in and visibility is reduced to less than one-quarter mile with ceiling zero below 400 feet MSL. Unfortunately for the lads in the *Seasprite*, they are not made aware of this until sometime between 0255 and 0300, when the ship notifies the H-2 tactical action officer (TAO) of the deteriorating weather conditions, although it's known to all ships in the force.

At 0317, the H-2 crew is notified by its ship to prepare to return for recovery. In spite of this, it's 0340 before the initial approach commences. It seems that flight quarters are delayed because the ship uses a messenger for the announcement vice the 1MC. This 23 minutes of lost time may prove critical since, at 0300, the *Seasprite* was down to fuel state 1+00. My initial apprehensions about this flight are now beginning to materialize.

The first approach begins at 0340 with the ceiling and visibility below the minimums prescribed in NWP-42 (200 feet, one-half mile). The PIC finds he can't transition from an instrument to a visual approach because of the reduced visibility, so he takes a waveoff. USS SMALLBOY tries to help out by turning on the bridge wing lights and directing them aft to provide additional lighting. The PIC's second approach terminates when he inadvertently puts the aircraft into a hover some 1,000 yards aft of the ship. I begin to tighten my grip on my trusty scythe as I realize the PIC is developing vertigo. In his disoriented condition, he sights the ship's lights and attempts a third approach (he doesn't advise his TAO (copilot) of his condition and ask for assistance, nor does the TAO recognize the pilot's plight and offer help). I am now hovering directly over the *Seasprite*, because I feel the situation is becoming hopeless. Sure enough, at a point about 800 yards astern the ship, the PIC is completely vertigoed and he flies the H-2 into the water. The aircraft remains afloat in an inverted position for about 40 seconds before making its way to the ocean floor. Will my services be needed? My eyes search the area for possible survivors. One by one, the helmeted heads of the three members of the crew pop out of the water, apparently unharmed by their ordeal. The ship launches a motor whaleboat which hurries to the scene and rescues our harried helo crew. I am a loser this time. In fact, the only winner is my good friend Davy Jones. He gets to add another naval aircraft to the aviation wing of his underwater museum.

Act III
The Inquiry

Scene I: The Factors

Normally, I don't hang around an area once I find I'm not needed. But the misdeeds associated with this flight so intrigue me, I have decided to take advantage of my ghostly presence to chronicle the factors cited and pass them on to you. Be advised, however, that it's not in my line of work to save aviators — quite the opposite, in fact. My only reason for bringing these factors to your attention is the challenge it presents. Most of you will listen to and learn from what is about to be said — a few won't. This latter group is the challenge. It will be interesting for me to find out which of them one day will join me for their final walk in space.

As I stated earlier, only one ship-controlled instrument approach was conducted during the one-week (actually two-day) work-up. While this is not a factor in itself, a ship and

Det unfamiliar with each other's modus operandi might have chosen to work in a few more.

The PIC released and accepted an aircraft for flight that was not properly equipped for night or IFR flights over water. The heading-hold feature of the ASE might have been very helpful when he became disoriented. The squadron CO had this to say about this action:

"Whenever a pilot makes a conscientious decision to deviate from established procedures and limitations because he thinks he knows better than NATOPS ('I don't use a system; therefore I don't need it') or because he perceives mission accomplishment to override safety of flight considerations, he is setting himself (and his crew) up for disaster. The inviolability of the minimum essential system matrix (MESM) has been totally addressed and discussed at several past AOMs, and this PIC was well aware of both command policy and the fact that the discrepancy in question was contained in the MESM."

Because the ship failed to provide the aircrew with a thorough mission brief sheet, both the aircrew and air control personnel were unaware of divert field availability and weather. This was unfortunate, since there were three divert fields within range of the SH-2F at 0300. One of them was open, above landing minimums, and had ASR/TACAN available.

The PIC failed to conduct a complete and thorough NATOPS crew brief prior to flight. Instrument approach techniques and vertigo/disorientation notification were omitted. This led to a serious breakdown in crew coordination when the instrument approaches began and the pilot fell victim to vertigo.

All the ships in the force were well aware that weather conditions were rapidly deteriorating, yet not one of them notified the aircrew that the fog was moving in. The *Seasprite* was flying above 400 feet MSL prior to being recalled, and the ceiling and visibility at that altitude posed no problem. I listened attentively as the above factors were discussed. I thought to myself, how can a ship and aircrew with this much experience allow themselves to come so unglued?

The PIC was on his third deployment as a Det OIC, and the ship had conducted extensive LAMPS operations. What it amounts to is this: one flight on one night of one day of one week of one year. It's difficult to believe that these operators had been lucky to this point. I need not spell out the message contained here, it's as plain as the scythe in my hand. This was a ship/Det marriage that had temporarily lost its glow, and that's all it took for the LAMPS to go out.

Epilogue

I hope you enjoyed accompanying me on this perilous journey fraught with errors by all participants. Those of you who have traveled this route yourselves know the fear and frustration associated with this type of flight. Those of you who haven't would do well to ponder what you would do to prevent yourselves from becoming one of the players in a similar scenario. And, with that in mind, I leave you with this thought-provoking quotation from my favorite bard, William Shakespeare, in "Henry IV, Part 1":

"Out of this nettle, danger, we pluck this flower, safety." ◄

Tom Wolfe on Safety vs. The Right Stuff

Reprinted from September 1982 Approach

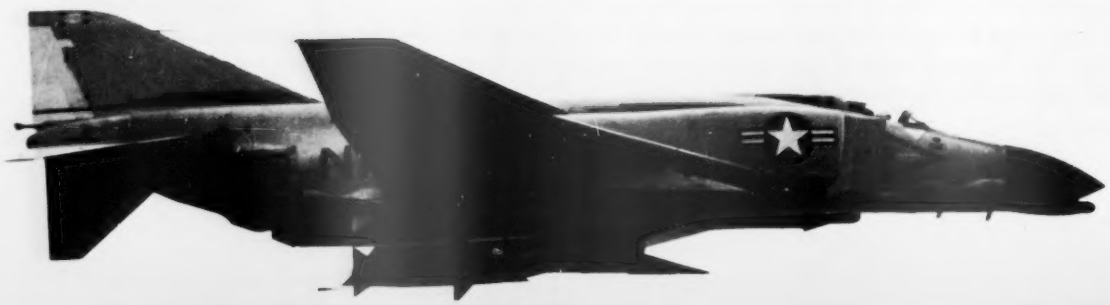
In what measure do safety and THE RIGHT STUFF fit into your flying style? Is it the correct measure? We asked Tom Wolfe to describe the relationship he sees between safety and THE RIGHT STUFF, and he was kind enough to do so.

If this page makes you consider the relative merits of safety and THE RIGHT STUFF, it will have more than served its purpose!

One of the things that struck me in talking to pilots was that there is a curiously safety-minded attitude built into the code I have called The Right Stuff. And it is this: no true believer in the code can accept the notion that his sublime and righteous stuff can be extinguished by anything so banal as an accident — i.e., a chance mishap against which his will and skill are powerless. So he concludes: "There are no such things as accidents. There are only stupid, inept, or panicky pilots." ("Therefore, a fellow like myself, with the right stuff, is immune to this business of accidents.") A corollary is that the truly best pilot is supremely responsible for every element of every flight, including the most mechanical safety checks. An oxygen hose connection separates and the pilot of an F-4 passes out from anoxia at 20,000 feet and crashes into the Chesapeake Bay and dies, and his comrades — or the righteous among them — say: "The idiot! How could anybody go up in an F-4 without checking his oxygen connections?"

I'm not saying that the logic of all this is unassailable, but there does seem to be a good healthy self-preserving streak of safety-consciousness in it.

I would say that, in any case, the code is necessary to all military pilots, now and in the future, whether they fly safely or not. The simple fact is, there are far safer ways of making one's way through this Trough of Mortal Error called life. But there are also far duller and more pointless ways. ◄

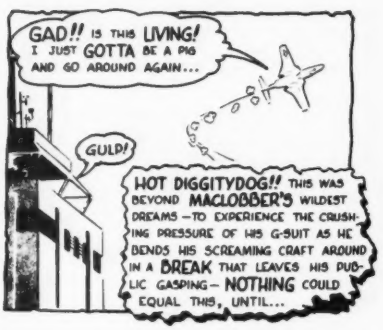


THE SHORT HAPPY LIFE OF FRANCIS MACLOBBER

ADAPTED FROM SOME WORDS OF WISDOM BY THAT FAMOUS AVIATOR: Ernest Hemingbird..

1950
FRANCIS MACLOBBER - ONCE A DULL COLORLESS YOUTH — NOW TRANSFORMED INTO A SUAVE, EXCITING, BON VIVANT NAVAL AVIATOR PREPARES TO SAVOR AGAIN THE THRILL THAT GIVES HIS LIFE REAL MEANING NAMELY: A HOT BREAK!!
HERE I AM, IN THE SLOT, MY HOSENOSE THUNDERING RESPONSIVELY UNDER MY KNOWING HAND!!
CLEARED TO BREAK, 403!

I'M SO TERRIFIC I CAN HARDLY STAND IT...
AND SO IT WENT WITH MACLOBBER - MONTH AFTER MONTH, EXPLOITING THE F4U AT 7½ G'S. HE WAS HAPPY, HAPPIER THAN HE'D EVER BEEN - SO EXULTED AT THOSE TIMES IN THE BREAK THAT HE THOUGHT HE COULD NEVER FEEL BETTER. BUT THEN, ALONG CAME...


GAD!! IS THIS LIVING! I JUST GOTTA BE A PIG AND GO AROUND AGAIN...
GULP!
HOT DIGGITYDOG!! THIS WAS BEYOND MACLOBBER'S WILDEST DREAMS — TO EXPERIENCE THE CRUSHING PRESSURE OF HIS G-SUIT AS HE BENDS HIS SCREAMING CRAFT AROUND IN A BREAK THAT LEAVES HIS PUBLIC GASPING — NOTHING COULD EQUAL THIS, UNTIL...

SNAP
SCREEEEEE
PRANG
NOTE: IT IS NATURALLY ASSUMED THAT MACLOBBER'S LAST WORDS WERE: "SOB! WHY DIDN'T I CHECK THE Vn DIAGRAM SOB! WEEP, WEEP...."

Reprinted from July 1955 Approach

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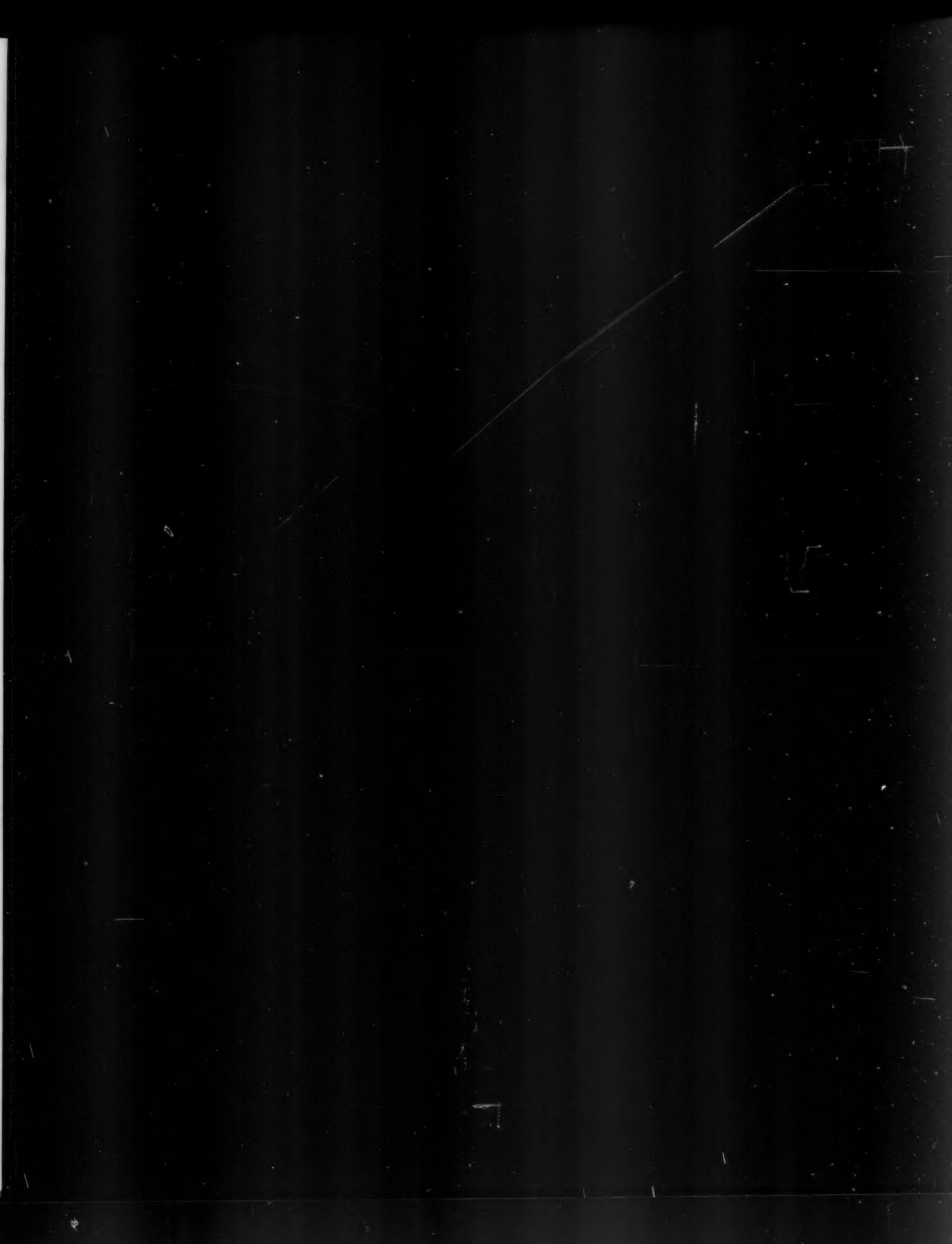
"The Dream Is Alive" Official NASA printing by Nick Gonzalez-Goad

Lend me the stone strength of the past
and I will lend you
The wings of the future, for I have them.

To the Rock That Will be a Cornerstone (1924)
By Robinson Jeffers